GenCore version 5.1.3

OM nucleic - nucleic search, using sw model

Run on: December 6, 2002, 16:39:25 ; Search time 231.5 Seconds
(without alignments)
14834.978 Million cell updates/sec

Title: US-10-025-514-7
Perfect score: 1525
Sequence: 1 tctagaccatgtctggaaag.....ccaactcagaagtagtcgac 1525

Scoring table: IDENTITY_NUC
Gapop 10.0 , Gapext 1.0

Searched: 2185239 seqs, 1125999159 residues

Total number of hits satisfying chosen parameters: 4370478

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	1525	100.0	1525	24	ABK88022	DNA sequence encod
2	1196	78.4	1756	24	ABK88023	DNA sequence encod
3	1194.8	78.3	1582	24	ABK88024	DNA sequence encod
4	1191.6	78.1	1525	24	ABK88025	DNA sequence encod
5	1191.4	78.1	1582	24	ABK88027	DNA sequence encod
6	1191.4	78.1	1756	24	ABK88026	DNA sequence encod
7	1182	77.5	1182	24	ABK88015	DNA encoding human
8	629.4	41.3	1260	19	AAV41730	Codon-optimised RA
9	436.4	28.6	1312	16	AAQ89254	Human alpha-1-tryp
10	436.4	28.6	1312	19	AAV28471	Nucleotide sequenc
11	436.4	28.6	1312	21	AAZ90199	Human alpha1-antit
12	433.4	28.4	1367	22	AAS45052	cDNA encoding nove
13	433.2	28.4	1352	13	AAQ31403	Human alpha-1 anti
14	433.2	28.4	1352	24	ABL67511	Thyroid cancer rel
15	433.2	28.4	1371	24	ABK84495	Human cDNA differe
16	433.2	28.4	1371	24	ABL67510	Thyroid cancer rel
17	433.2	28.4	1433	10	AAN91077	Sequence encoding
18	433.2	28.4	1434	5	AAN40078	Sequence encoding
19	433.2	28.4	1434	20	AAX83548	Human alpha1-anti-
20	433.2	28.4	5932	21	AAZ45928	Nucleotide sequenc
21	433.2	28.4	6142	21	AAZ45932	Nucleotide sequenc
22	433.2	28.4	6142	21	AAZ45933	Nucleotide sequenc
23	433.2	28.4	6565	21	AAZ45925	Nucleotide sequenc
24	433.2	28.4	6714	21	AAZ45930	Nucleotide sequenc
25	433.2	28.4	6924	21	AAZ45934	Nucleotide sequenc
26	433.2	28.4	6924	21	AAZ45935	Nucleotide sequenc
27	433.2	28.4	6981	21	AAZ45931	Nucleotide sequenc
28	433.2	28.4	7054	21	AAZ45927	Nucleotide sequenc
29	432.8	28.4	7405	21	AAZ45926	Nucleotide sequenc
30	431.6	28.3	1352	18	AAT72858	Human alpha-1-anti
31	430.4	28.2	1185	19	AAV41726	Native coding sequ
32	430	28.2	1434	10	AAN90341	Sequence of alpha-
33	429.6	28.2	1312	10	AAN97127	Sequence of alpha-
34	429	28.1	1189	13	AAQ21125	Alpha-1-antitrypsi
35	428.4	28.1	1378	13	AAQ23746	Alpha-1 antitrypsi
36	428.4	28.1	1396	11	AAQ03184	Entire sequence of
37	426.8	28.0	1185	7	AAN60417	Human alpha 1-anti
38	426.8	28.0	1423	6	AAN50425	Sequence encoding
39	425.2	27.9	1299	6	AAN50540	Sequence of human
40	425.2	27.9	1378	6	AAN50021	Sequence encoding
41	411.2	27.0	1390	22	AAH23089	Osteoarthritis tis
42	401.4	26.3	2013	24	ABL59152	Sequence of fusion
43	375.6	24.6	1242	18	AAT79493	Protease inhibitor
44	362.8	23.8	1242	18	AAT78180	Recombinant squirr
45	360.8	23.7	1312	10	AAN91078	Alpha-1-antitrypsi

ALIGNMENTS

RESULT 1
ABK88022
ID ABK88022 standard; DNA; 1525 BP.
XX
AC ABK88022;
XX
DT 07-OCT-2002 (first entry)
XX
DE DNA sequence encoding SLAP1 fusion protein.
XX
KW Yeast; alpha factor; gene; ds; Alzheimer's disease; SLAP1;
KW malaria; emphysema; asthma; chronic obstructive pulmonary disease;
KW cystic fibrosis; otitis media; otitis external; HIV; psoriasis; eczema;
KW human immunodeficiency virus; atopic dermatitis; muscular dystrophy;
KW herpes; ulceration; sepsis; rheumatoid arthritis; periodontal disease;
KW tumour metastasis; tumour angiogenesis; osteoporosis; Paget's disease;
KW glomerulonephritis; scleroderma; hypertension.
XX
OS Homo sapiens.
OS Synthetic.
XX
FH Key Location/Qualifiers
FT RBS 6..8
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FT /standard_name= "Ribosome binding site"
FT CDS 9..1520
FT /*tag= b
FT /product= "SLAP1 fusion protein"
FT misc_feature 12..332
FT /*tag= c
FT /note= "SLPI coding region"
FT misc_feature 333-335

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XX
PD   27-JUN-2002.
XX
PF   18-DEC-2001; 2001WO-US49256.
XX
PR   18-DEC-2000; 2000US-256699P.
PR   20-NOV-2001; 2001US-331966P.
XX
PA   (ARRI-) ARRIVA PHARM INC.
XX
PI   Barr PJ,  Gibson HL,  Pemberton P;
XX
DR   WPI; 2002-500631/53.
DR   P-PSDB; AAU99881.
XX
PT   Novel fusion protein useful for inhibiting protease activity associated
PT   with a disorder such as emphysema, asthma, comprises a first protease
PT   inhibitor comprising alpha 1-antitrypsin and a second protease
PT   inhibitor -
XX
PS   Example 1; Page 73-73; 134pp; English.
XX
CC   This invention relates to a novel fusion protein comprising a first
CC   protease inhibitor comprising an alpha1-antitrypsin or its functionally
CC   active portion and a second protease inhibitor or its functionally
CC   active protein. The fusion proteins of the invention may act as an
CC   inhibitor of protease activity. The fusion protein of the invention
CC   is useful for inhibiting protease activity associated with a disorder
CC   such as emphysema, asthma, chronic obstructive pulmonary disease,
CC   cystic fibrosis, otitis media, otitis external or HIV infection, or
CC   for treating an individual suffering from or at risk for a disease or
CC   disorder involving unwanted protease activity. The proteins are useful
CC   for treating dermatological diseases such as atopic dermatitis, eczema
CC   and psoriasis, in inflammatory responses to viral infection, and for
CC   treating herpes infection, corneal or epidermal ulceration, chronic
CC   non-healing wounds, sepsis, rheumatoid arthritis, periodontal disease,
CC   tumour metastasis and tumour angiogenesis, gastric ulceration,
CC   osteoporosis, Paget's disease, glomerulonephritis, scleroderma, malaria,
CC   bacterial infection, Alzheimer's disease, hypertension and muscular
CC   dystrophy. The present sequence represents the DNA encoding the
CC   SLAP1 fusion protein of the invention.
XX
SQ   Sequence 1525 BP; 467 A; 286 C; 314 G; 458 T; 0 other;
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Query Match 100.0%; Score 1525; DB 24; Length 1525;
Best Local Similarity 100.0%; Pred. No. 0;
Matches 1525; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Db       1 TCTAGACCATGTCTGGAAAGTCTTTCAAGGCCGGTGTTTGTCCACCAAAGAAGTCCGCTC 60

Qy      61 AATGTTTGAGATACAAGAAGCCAGAATGTCAATCCGACTGGCAATGTCCAGGTAAGAAGA 120
Db      61 AATGTTTGAGATACAAGAAGCCAGAATGTCAATCCGACTGGCAATGTCCAGGTAAGAAGA 120

Qy     121 GATGTTGTCCAGACACTTGTGGTATCAAGTGTCTAGACCCAGTTGACACCCCAAACCCAA 180
Db     121 GATGTTGTCCAGACACTTGTGGTATCAAGTGTCTAGACCCAGTTGACACCCCAAACCCAA 180

Qy     181 CTAGAAGAAAGCCAGGTAAGTGTCCAGTTACTTACGGTCAATGTTTGATGTTGAACCCAC 240
Db     181 CTAGAAGAAAGCCAGGTAAGTGTCCAGTTACTTACGGTCAATGTTTGATGTTGAACCCAC 240

Qy     241 CAAACTTCTGTGAAATGGACGGTCAATGTAAGAGAGACTTGAAGTGTTGTATGGGTATGT 300
Db     241 CAAACTTCTGTGAAATGGACGGTCAATGTAAGAGAGACTTGAAGTGTTGTATGGGTATGT 300

Qy     301 GTGGTAAGTCCTGTGTTTCCCCAGTCAAGGCCATGGAAGACCCTCAAGGCGACGCCGCTC 360
Db     301 GTGGTAAGTCCTGTGTTTCCCCAGTCAAGGCCATGGAAGACCCTCAAGGCGACGCCGCTC 360

Qy     361 AAAAAACCGACACCAGTCATCACGACCAAGACCATCCGACTTTTAATAAAATTACTCCAA 420
Db     361 AAAAAACCGACACCAGTCATCACGACCAAGACCATCCGACTTTTAATAAAATTACTCCAA 420

Qy     421 ATTTAGCCGAATTTGCTTTTTCTTTGTATAGACAATTAGCTCATCAAAGTAATTCTACTA 480
Db     421 ATTTAGCCGAATTTGCTTTTTCTTTGTATAGACAATTAGCTCATCAAAGTAATTCTACTA 480

Qy     481 ACATTTTTTTTTAGTCCTGTTTCTATTGCCACTGCTTTCGCCATGTTGAGTTTAGGTACTA 540
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Qy     541 AAGCCGATACCCATGACGAGATTTTAGAAGGTTTAAACTTTAATTTGACCGAAATCCCAG 600
Db     541 AAGCCGATACCCATGACGAGATTTTAGAAGGTTTAAACTTTAATTTGACCGAAATCCCAG 600

Qy     601 AAGCCCAAATTCACGAGGGTTTTCAAGAGTTGTTGAGAACTTTGAATCAACCTGATTCTC 660
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Qy     661 AATTGCAATTAACTACTGGTAACGGTTTATTTTTGTCTGAAGGTTTAAAATTGGTTGACA 720
Db     661 AATTGCAATTAACTACTGGTAACGGTTTATTTTTGTCTGAAGGTTTAAAATTGGTTGACA 720

Qy     721 AATTCCTAGAAGACGTCAAGAAACTATATCATAGTGAGGCTTTTACCGTTAATTTTGGTG 780
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Db     841 TCGTTGACCTAGTTAAAGAATTAGATCGTGATACCGTCTTCGCACTAGTTAACTATATTT 900

Qy     901 TTTTCAAGGGTAAGTGGGAACGTCCTTTCGAGGTTAAAGATACTGAAGAGGAAGATTTTC 960
Db     901 TTTTCAAGGGTAAGTGGGAACGTCCTTTCGAGGTTAAAGATACTGAAGAGGAAGATTTTC 960

Qy     961 ATGTTGATCAAGTTACTACTGTCAAAGTTCCAATGATGAAAAGACTGGGTATGTTCAATA 1020
Db     961 ATGTTGATCAAGTTACTACTGTCAAAGTTCCAATGATGAAAAGACTGGGTATGTTCAATA 1020

Qy    1021 TTCAACATTGCAAAAAATTAAGTTCTTGGGTCTTATTAATGAAGTATTTAGGTAACGCTA 1080
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Qy    1081 CTGCTATTTTTTTTTTACCAGACGAAGGTAAGCTTCAACATTTAGAGAATGAGTTGACTC 1140
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Qy    1141 ATGACATTATTACTAAATTTTTAGAGAACGAGGATCGTCGTAGCGCTTCTCTGCACCTGC 1200
Db    1141 ATGACATTATTACTAAATTTTTAGAGAACGAGGATCGTCGTAGCGCTTCTCTGCACCTGC 1200

Qy    1201 CAAAGTTAAGTATCACCGGTACTTACGACTTAAAATCTGTTTTAGGCCAGTTAGGTATTA 1260
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Qy    1261 CCAAAGTTTTTTCTAACGGTGCCGATTTGAGTGGTGTTACTGAAGAAGCTCCATTAAAAT 1320
Db    1261 CCAAAGTTTTTTCTAACGGTGCCGATTTGAGTGGTGTTACTGAAGAAGCTCCATTAAAAT 1320

Qy    1321 TGAGTAAAGCTGTTCACAAAGCCGTCTTAACTATTGATGAAAAGGGTACCGAGGCCGCCG 1380
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Qy   1381 GCGCTATGTTCCTGGAAGCTATTCCAATGAGCATTCCACCAGAAGTTAAATTTAATAAAC 1440
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Qy   1441 CATTCGTTTTTCTGATGATCGAGCAGAACACTAAAAGCCCATTGTTTATGGGTAAGGTTG 1500
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db   1441 CATTCGTTTTTCTGATGATCGAGCAGAACACTAAAAGCCCATTGTTTATGGGTAAGGTTG 1500

Qy   1501 TCAACCCAACTCAGAAGTAGTCGAC 1525
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Db   1501 TCAACCCAACTCAGAAGTAGTCGAC 1525
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RESULT 2
ABK88023
ID   ABK88023 standard; DNA; 1756 BP.
XX
AC   ABK88023;
XX
DT   07-OCT-2002  (first entry)
XX
DE   DNA sequence encoding TAP1 fusion protein.
XX
KW   TAP1; gene; ds; Alzheimer's disease; tumour angiogenesis;
KW   malaria; emphysema; asthma; chronic obstructive pulmonary disease;
KW   cystic fibrosis; otitis media; otitis external; HIV; psoriasis; eczema;
KW   human immunodeficiency virus; atopic dermatitis; muscular dystrophy;
KW   herpes; ulceration; sepsis; rheumatoid arthritis; periodontal disease;
KW   tumour metastasis; osteoporosis; Paget's disease; scleroderma;
KW   glomerulonephritis; hypertension.
XX
OS    Homo sapiens.
OS    Synthetic.
XX
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PN   WO200250287-A2.
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PD   27-JUN-2002.
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PF   18-DEC-2001; 2001WO-US49256.
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PR   18-DEC-2000; 2000US-256699P.
PR   20-NOV-2001; 2001US-331966P.
XX
PA   (ARRI-) ARRIVA PHARM INC.
XX
PI   Barr PJ,  Gibson HL,  Pemberton P;
XX
DR   WPI; 2002-500631/53.
DR   P-PSDB; AAU99882.
XX
PT   Novel fusion protein useful for inhibiting protease activity associated
PT   with a disorder such as emphysema, asthma, comprises a first protease
PT   inhibitor comprising alpha 1-antitrypsin and a second protease
PT   inhibitor -
XX
PS   Example 1; Page 77-78; 134pp; English.
XX
CC   This invention relates to a novel fusion protein comprising a first
CC   protease inhibitor comprising an alphal-antitrypsin or its functionally
CC   active portion and a second protease inhibitor or its functionally
CC   active protein. The fusion proteins of the invention may act as an
CC   inhibitor of protease activity. The fusion protein of the invention
CC   is useful for inhibiting protease activity associated with a disorder
CC   such as emphysema, asthma, chronic obstructive pulmonary disease,
CC   cystic fibrosis, otitis media, otitis external or HIV infection, or
CC   for treating an individual suffering from or at risk for a disease or
CC   disorder involving unwanted protease activity. The proteins are useful
CC   for treating dermatological diseases such as atopic dermatitis, eczema
CC   and psoriasis, in inflammatory responses to viral infection, and for
CC   treating herpes infection, corneal or epidermal ulceration, chronic
CC   non-healing wounds, sepsis, rheumatoid arthritis, periodontal disease,
CC   tumour metastasis and tumour angiogenesis, gastric ulceration,
CC   osteoporosis, Paget's disease, glomerulonephritis, scleroderma, malaria,
CC   bacterial infection, Alzheimer's disease, hypertension and muscular
CC   dystrophy. The present sequence represents the DNA encoding the
CC   TAP1 fusion protein of the invention.
XX
SQ   Sequence 1756 BP; 493 A; 395 C; 373 G; 495 T; 0 other;
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Qy    330 GCCATGGAAGACCCTCAAGGCGACGCCGCTCAAAAAACCGACACCAGTCATCACGACCAA 389
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Qy    390 GACCATCCGACTTTTAATAAAATTACTCCAAATTTAGCCGAATTTGCTTTTTCTTTGTAT 449
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Qy    450 AGACAATTAGCTCATCAAAGTAATTCTACTAACATTTTTTTTAGTCCTGTTTCTATTGCC 509
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Qy    510 ACTGCTTTCGCCATGTTGAGTTTAGGTACTAAAGCCGATACCCATGACGAGATTTTAGAA 569
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    741 ACTGCTTTCGCCATGTTGAGTTTAGGTACTAAAGCCGATACCCATGACGAGATTTTAGAA 800

Qy    570 GGTTTAAACTTTAATTTGACCGAAATCCCAGAAGCCCAAATTCACGAGGGTTTTCAAGAG 629
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Qy    630 TTGTTGAGAACTTTGAATCAACCTGATTCTCAATTGCAATTAACTACTGGTAACGGTTTA 689
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Qy    690 TTTTTGTCTGAAGGTTTAAAATTGGTTGACAAATTCCTAGAAGACGTCAAGAAACTATAT 749
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Qy    750 CATAGTGAGGCTTTTACCGTTAATTTTGGTGATACTGAGGAAGCTAAAAAGCAAATTAAT 809
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Db    981 CATAGTGAGGCTTTTACCGTTAATTTTGGTGATACTGAGGAAGCTAAAAAGCAAATTAAT 1040

Qy    810 GATTATGTTGAGAAAGGCACCCAGGGTAAGATCGTTGACCTAGTTAAAGAATTAGATCGT 869
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Db   1041 GATTATGTTGAGAAAGGCACCCAGGGTAAGATCGTTGACCTAGTTAAAGAATTAGATCGT 1100

Qy    870 GATACCGTCTTCGCACTAGTTAACTATATTTTTTTCAAGGGTAAGTGGGAACGTCCTTTC 929
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Db   1101 GATACCGTCTTCGCACTAGTTAACTATATTTTTTTCAAGGGTAAGTGGGAACGTCCTTTC 1160

Qy    930 GAGGTTAAAGATACTGAAGAGGAAGATTTTCATGTTGATCAAGTTACTACTGTCAAAGTT 989
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Db   1161 GAGGTTAAAGATACTGAAGAGGAAGATTTTCATGTTGATCAAGTTACTACTGTCAAAGTT 1220

Qy    990 CCAATGATGAAAAGACTGGGTATGTTCAATATTCAACATTGCAAAAAATTAAGTTCTTGG 1049
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Db   1221 CCAATGATGAAAAGACTGGGTATGTTCAATATTCAACATTGCAAAAAATTAAGTTCTTGG 1280

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Qy   1110 AAGCTTCAACATTTAGAGAATGAGTTGACTCATGACATTATTACTAAATTTTTAGAGAAC 1169
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Qy   1170 GAGGATCGTCGTAGCGCTTCTCTGCACCTGCCAAAGTTAAGTATCACCGGTACTTACGAC 1229
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Qy   1230 TTAAAATCTGTTTTAGGCCAGTTAGGTATTACCAAAGTTTTTTCTAACGGTGCCGATTTG 1289
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Qy   1290 AGTGGTGTTACTGAAGAAGCTCCATTAAAATTGAGTAAAGCTGTTCACAAAGCCGTCTTA 1349
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Qy   1350 ACTATTGATGAAAAGGGTACCGAGGCCGCCGGCGCTATGTTCCTGGAAGCTATTCCAATG 1409
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Qy   1410 AGCATTCCACCAGAAGTTAAATTTAATAAACCATTCGTTTTTCTGATGATCGAGCAGAAC 1469
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Db   1641 AGCATTCCACCAGAAGTTAAATTTAATAAACCATTCGTTTTTCTGATGATCGAGCAGAAC 1700

Qy   1470 ACTAAAAGCCCATTGTTTATGGGTAAGGTTGTCAACCCAACTCAGAAGTAGTCGAC 1525
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RESULT 3
ABK88024
ID ABK88024 standard; DNA; 1582 BP.
XX
AC ABK88024;
XX
DT 07-OCT-2002 (first entry)
XX
DE DNA sequence encoding N-TAP1 fusion protein.
XX
KW NTAP1; gene; ds; Alzheimer's disease; tumour angiogenesis;
KW malaria; emphysema; asthma; chronic obstructive pulmonary disease;
KW cystic fibrosis; otitis media; otitis external; HIV; psoriasis; eczema;
KW human immunodeficiency virus; atopic dermatitis; muscular dystrophy;
KW herpes; ulceration; sepsis; rheumatoid arthritis; periodontal disease;
KW tumour metastasis; osteoporosis; Paget's disease; scleroderma;
KW glomerulonephritis; hypertension.
XX
OS Homo sapiens.
OS Synthetic.
XX

FH	Key	Location/Qualifiers
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FT		/*tag= a
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FT		/note= "AAT coding region"

XX
PN WO200250287-A2.
XX
PD 27-JUN-2002.
XX
PF 18-DEC-2001; 2001WO-US49256.
XX
PR 18-DEC-2000; 2000US-256699P.
PR 20-NOV-2001; 2001US-331966P.
XX
PA (ARRI-) ARRIVA PHARM INC.
XX
PI Barr PJ, Gibson HL, Pemberton P; ,
XX
DR WPI; 2002-500631/53.
DR P-PSDB; AAU99883.
XX
PT Novel fusion protein useful for inhibiting protease activity associated
PT with a disorder such as emphysema, asthma, comprises a first protease
PT inhibitor comprising alpha 1-antitrypsin and a second protease
PT inhibitor -
XX
PS Example 2; Page 85-86; 134pp; English.
XX
CC This invention relates to a novel fusion protein comprising a first
CC protease inhibitor comprising an alphal-antitrypsin or its functionally
CC active portion and a second protease inhibitor or its functionally
CC active protein. The fusion proteins of the invention may act as an
CC inhibitor of protease activity. The fusion protein of the invention
CC is useful for inhibiting protease activity associated with a disorder
CC such as emphysema, asthma, chronic obstructive pulmonary disease,
CC cystic fibrosis, otitis media, otitis external or HIV infection, or
CC for treating an individual suffering from or at risk for a disease or
CC disorder involving unwanted protease activity. The proteins are useful
CC for treating dermatological diseases such as atopic dermatitis, eczema
CC and psoriasis, in inflammatory responses to viral infection, and for
CC treating herpes infection, corneal or epidermal ulceration, chronic
CC non-healing wounds, sepsis, rheumatoid arthritis, periodontal disease,
CC tumour metastasis and tumour angiogenesis, gastric ulceration,
CC osteoporosis, Paget's disease, glomerulonephritis, scleroderma, malaria,
CC bacterial infection, Alzheimer's disease, hypertension and muscular
CC dystrophy. The present sequence represents the DNA encoding the
CC NTAP1 fusion protein of the invention.
XX
SQ Sequence 1582 BP; 464 A; 333 C; 329 G; 456 T; 0 other;

Query Match 78.3%; Score 1194.8; DB 24; Length 1582;
Best Local Similarity 99.8%; Pred. No. 2.7e-290;
Matches 1196; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

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Qy    388 AAGACCATCCGACTTTTAATAAAATTACTCCAAATTTAGCCGAATTTGCTTTTTCTTTGT 447
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Qy    448 ATAGACAATTAGCTCATCAAAGTAATTCTACTAACATTTTTTTTAGTCCTGTTTCTATTG 507
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Qy     748 ATCATAGTGAGGCTTTTACCGTTAATTTTGGTGATACTGAGGAAGCTAAAAAGCAAATTA 807
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Qy     808 ATGATTATGTTGAGAAAGGCACCCAGGGTAAGATCGTTGACCTAGTTAAAGAATTAGATC 867
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Db     865 ATGATTATGTTGAGAAAGGCACCCAGGGTAAGATCGTTGACCTAGTTAAAGAATTAGATC 924

Qy     868 GTGATACCGTCTTCGCACTAGTTAACTATATTTTTTTCAAGGGTAAGTGGGAACGTCCTT 927
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RESULT 4
ABK88025
ID ABK88025 standard; DNA; 1525 BP.
XX
AC ABK88025;
XX
DT 07-OCT-2002 (first entry)
XX
DE DNA sequence encoding rSLAP1 fusion protein.
XX
KW rSLAP1; gene; ds; Alzheimer's disease; tumour angiogenesis;
KW malaria; emphysema; asthma; chronic obstructive pulmonary disease;
KW cystic fibrosis; otitis media; otitis external; HIV; psoriasis; eczema;
KW human immunodeficiency virus; atopic dermatitis; muscular dystrophy;
KW herpes; ulceration; sepsis; rheumatoid arthritis; periodontal disease;
KW tumour metastasis; osteoporosis; Paget's disease; scleroderma;
KW glomerulonephritis; hypertension.
XX
OS Homo sapiens.
OS Synthetic.
XX
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FT /standard_name= "Ribosome binding site"
FT CDS 9..1520
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XX
PD 27-JUN-2002.
XX
PF 18-DEC-2001; 2001WO-US49256.
XX
PR 18-DEC-2000; 2000US-256699P.
PR 20-NOV-2001; 2001US-331966P.
XX
PA (ARRI-) ARRIVA PHARM INC.
XX
PI Barr PJ, Gibson HL, Pemberton P;
XX
DR WPI; 2002-500631/53.
DR P-PSDB; AAU99884.
XX
PT Novel fusion protein useful for inhibiting protease activity associated
PT with a disorder such as emphysema, asthma, comprises a first protease
PT inhibitor comprising alpha 1-antitrypsin and a second protease
PT inhibitor -
XX
PS Example 3; Page 89-90; 134pp; English.
XX
CC This invention relates to a novel fusion protein comprising a first
CC protease inhibitor comprising an alphal-antitrypsin or its functionally
CC active portion and a second protease inhibitor or its functionally
CC active protein. The fusion proteins of the invention may act as an
CC inhibitor of protease activity. The fusion protein of the invention
CC is useful for inhibiting protease activity associated with a disorder
CC such as emphysema, asthma, chronic obstructive pulmonary disease,
CC cystic fibrosis, otitis media, otitis external or HIV infection, or
CC for treating an individual suffering from or at risk for a disease or
CC disorder involving unwanted protease activity. The proteins are useful
CC for treating dermatological diseases such as atopic dermatitis, eczema
CC and psoriasis, in inflammatory responses to viral infection, and for
CC treating herpes infection, corneal or epidermal ulceration, chronic
CC non-healing wounds, sepsis, rheumatoid arthritis, periodontal disease,
CC tumour metastasis and tumour angiogenesis, gastric ulceration,
CC osteoporosis, Paget's disease, glomerulonephritis, scleroderma, malaria,
CC bacterial infection, Alzheimer's disease, hypertension and muscular
CC dystrophy. The present sequence represents the DNA encoding the
CC rSLAP1 fusion protein of the invention.
XX
SQ Sequence 1525 BP; 467 A; 287 C; 314 G; 457 T; 0 other;

Query Match 78.1%; Score 1191.6; DB 24; Length 1525;
Best Local Similarity 99.7%; Pred. No. 1.7e-289;
Matches 1194; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

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Db    121 TGTATAGACAATTAGCTCATCAAAGTAATTCTACTAACATTTTTTTTAGTCCTGTTTCTA 180

Qy    505 TTGCCACTGCTTTCGCCATGTTGAGTTTAGGTACTAAAGCCGATACCCATGACGAGATTT 564

Db    181 TTGCCACTGCTTTCGCCATGTTGAGTTTAGGTACTAAAGCCGATACCCATGACGAGATTT 240

Qy    565 TAGAAGGTTTAAACTTTAATTTGACCGAAATCCCAGAAGCCCAAATTCACGAGGGTTTTC 624

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Qy    625 AAGAGTTGTTGAGAACTTTGAATCAACCTGATTCTCAATTGCAATTAACTACTGGTAACG 684

Db    301 AAGAGTTGTTGAGAACTTTGAATCAACCTGATTCTCAATTGCAATTAACTACTGGTAACG 360

Qy    685 GTTTATTTTTGTCTGAAGGTTTAAAATTGGTTGACAAATTCCTAGAAGACGTCAAGAAAC 744

Db    361 GTTTATTTTTGTCTGAAGGTTTAAAATTGGTTGACAAATTCCTAGAAGACGTCAAGAAAC 420

Qy    745 TATATCATAGTGAGGCTTTTACCGTTAATTTTGGTGATACTGAGGAAGCTAAAAAGCAAA 804

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Qy    805 TTAATGATTATGTTGAGAAAGGCACCCAGGGTAAGATCGTTGACCTAGTTAAAGAATTAG 864

Db    481 TTAATGATTATGTTGAGAAAGGCACCCAGGGTAAGATCGTTGACCTAGTTAAAGAATTAG 540

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Qy    925 CTTTCGAGGTTAAAGATACTGAAGAGGAAGATTTTCATGTTGATCAAGTTACTACTGTCA 984

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Qy   1045 CTTGGGTCTTATTAATGAAGTATTTAGGTAACGCTACTGCTATTTTTTTTTTTACCAGACG 1104

Db    721 CTTGGGTCTTATTAATGAAGTATTTAGGTAACGCTACTGCTATTTTTTTTTTTACCAGACG 780

Qy   1105 AAGGTAAGCTTCAACATTTAGAGAATGAGTTGACTCATGACATTATTACTAAATTTTTAG 1164

Db    781 AAGGTAAGCTTCAACATTTAGAGAATGAGTTGACTCATGACATTATTACTAAATTTTTAG 840

Qy   1165 AGAACGAGGATCGTCGTAGCGCTTCTCTGCACCTGCCAAAGTTAAGTATCACCGGTACTT 1224

Db    841 AGAACGAGGATCGTCGTAGCGCTTCTCTGCACCTGCCAAAGTTAAGTATCACCGGTACTT 900

Qy   1225 ACGACTTAAAATCTGTTTTAGGCCAGTTAGGTATTACCAAAGTTTTTTCTAACGGTGCCG 1284

Db    901 ACGACTTAAAATCTGTTTTAGGCCAGTTAGGTATTACCAAAGTTTTTTCTAACGGTGCCG 960

Qy   1285 ATTTGAGTGGTGTTACTGAAGAAGCTCCATTAAAATTGAGTAAAGCTGTTCACAAAGCCG 1344

Db    961 ATTTGAGTGGTGTTACTGAAGAAGCTCCATTAAAATTGAGTAAAGCTGTTCACAAAGCCG 1020

Qy   1345 TCTTAACTATTGATGAAAAGGGTACCGAGGCCGCCGGCGCTATGTTCCTGGAAGCTATTC 1404

Db   1021 TCTTAACTATTGATGAAAAGGGTACCGAGGCCGCCGGCGCTATGTTCCTGGAAGCTATTC 1080

Qy   1405 CAATGAGCATTCCACCAGAAGTTAAATTTAATAAACCATTCGTTTTTCTGATGATCGAGC 1464

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RESULT 5
ABK88027
ID ABK88027 standard; DNA; 1582 BP.
XX
AC ABK88027;
XX
DT 07-OCT-2002 (first entry)
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DE DNA sequence encoding rN-TAP1 fusion protein.
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KW herpes; ulceration; sepsis; rheumatoid arthritis; periodontal disease;
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FT		/*tag= b
FT		/product= "rTAP1 fusion protein"
FT	misc_feature	12..1193
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XX
PN WO200250287-A2.
XX
PD 27-JUN-2002.
XX
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PR 20-NOV-2001; 2001US-331966P.
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PI Barr PJ, Gibson HL, Pemberton P;
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DR WPI; 2002-500631/53.
DR P-PSDB; AAU99885.
XX
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PT inhibitor comprising alpha 1-antitrypsin and a second protease
PT inhibitor -
XX
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CC active portion and a second protease inhibitor or its functionally
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CC inhibitor of protease activity. The fusion protein of the invention

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CC such as emphysema, asthma, chronic obstructive pulmonary disease,
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CC for treating an individual suffering from or at risk for a disease or
CC disorder involving unwanted protease activity. The proteins are useful
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CC non-healing wounds, sepsis, rheumatoid arthritis, periodontal disease,
CC tumour metastasis and tumour angiogenesis, gastric ulceration,
CC osteoporosis, Paget's disease, glomerulonephritis, scleroderma, malaria,
CC bacterial infection, Alzheimer's disease, hypertension and muscular
CC dystrophy. The present sequence represents the DNA encoding the
CC rN-TAP1 fusion protein of the invention.
XX
SQ Sequence 1582 BP; 464 A; 334 C; 329 G; 455 T; 0 other;

Query Match 78.1%; Score 1191.4; DB 24; Length 1582;
Best Local Similarity 99.5%; Pred. No. 1.9e-289;
Matches 1195; Conservative 0; Mismatches 6; Indels 0; Gaps 0;

```
Qy    325 TCAAGGCCATGGAAGACCCTCAAGGCGACGCCGCTCAAAAAACCGACACCAGTCATCACG 384
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Qy    685 GTTTATTTTTGTCTGAAGGTTTAAAATTGGTTGACAAATTCCTAGAAGACGTCAAGAAAC 744
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          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    901 ACGACTTAAAATCTGTTTTAGGCCAGTTAGGTATTACCAAAGTTTTTTCTAACGGTGCCG 960

Qy   1285 ATTTGAGTGGTGTTACTGAAGAAGCTCCATTAAAATTGAGTAAAGCTGTTCACAAAGCCG 1344
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    961 ATTTGAGTGGTGTTACTGAAGAAGCTCCATTAAAATTGAGTAAAGCTGTTCACAAAGCCG 1020

Qy   1345 TCTTAACTATTGATGAAAAGGGTACCGAGGCCGCCGGCGCTATGTTCCTGGAAGCTATTC 1404
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db   1021 TCTTAACTATTGATGAAAAGGGTACCGAGGCCGCCGGCGCTATGTTCCTGGAAGCTATTC 1080

Qy   1405 CAATGAGCATTCCACCAGAAGTTAAATTTAATAAACCATTCGTTTTTCTGATGATCGAGC 1464
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db   1081 CAATGAGCATTCCACCAGAAGTTAAATTTAATAAACCATTCGTTTTTCTGATGATCGAGC 1140

Qy   1465 AGAACACTAAAAGCCCATTGTTTATGGGTAAGGTTGTCAACCCAACTCAGAAGTAGTCGA 1524
          ||||||||||||||||||||||||||||||||||||||||||||||||||||  ||  |
Db   1141 AGAACACTAAAAGCCCATTGTTTATGGGTAAGGTTGTCAACCCAACTCAGAAGATGTGCA 1200

Qy   1525 C 1525
          |
Db   1201 C 1201
```

RESULT 6
ABK88026
ID ABK88026 standard; DNA; 1756 BP.
XX
AC ABK88026;
XX
DT 07-OCT-2002 (first entry)
XX
DE DNA sequence encoding rTAP1 fusion protein.
XX
KW rTAP1; gene; ds; Alzheimer's disease; tumour angiogenesis;
KW malaria; emphysema; asthma; chronic obstructive pulmonary disease;
KW cystic fibrosis; otitis media; otitis external; HIV; psoriasis; eczema;
KW human immunodeficiency virus; atopic dermatitis; muscular dystrophy;
KW herpes; ulceration; sepsis; rheumatoid arthritis; periodontal disease;
KW tumour metastasis; osteoporosis; Paget's disease; scleroderma;
KW glomerulonephritis; hypertension.
XX
OS Homo sapiens.
OS Synthetic.
XX

FH	Key	Location/Qualifiers
FT	RBS	6..8
FT		/*tag= a
FT		/standard_name= "Ribosome binding site"
FT	CDS	9..1751
FT		/*tag= b
FT		/product= "rTAP1 fusion protein"
FT	misc_feature	12..1193
FT		/*tag= c
FT		/note= "AAT coding region"
FT	misc_feature	1194..1196
FT		/*tag= d
FT		/note= "linking codon"
FT	misc_feature	1197..1748
FT		/*tag= e
FT		/note= "TIMP-1 coding region"

XX
PN WO200250287-A2.
XX

```
PD   27-JUN-2002.
XX
PF   18-DEC-2001; 2001WO-US49256.
XX
PR   18-DEC-2000; 2000US-256699P.
PR   20-NOV-2001; 2001US-331966P.
XX
PA   (ARRI-) ARRIVA PHARM INC.
XX
PI   Barr PJ,  Gibson HL,  Pemberton P;
XX
DR   WPI; 2002-500631/53.
DR   P-PSDB; AAU99889.
XX
PT   Novel fusion protein useful for inhibiting protease activity associated
PT   with a disorder such as emphysema, asthma, comprises a first protease
PT   inhibitor comprising alpha 1-antitrypsin and a second protease
PT   inhibitor -
XX
PS   Example 3; Page 92-93; 134pp; English.
XX
CC   This invention relates to a novel fusion protein comprising a first
CC   protease inhibitor comprising an alpha1-antitrypsin or its functionally
CC   active portion and a second protease inhibitor or its functionally
CC   active protein. The fusion proteins of the invention may act as an
CC   inhibitor of protease activity. The fusion protein of the invention
CC   is useful for inhibiting protease activity associated with a disorder
CC   such as emphysema, asthma, chronic obstructive pulmonary disease,
CC   cystic fibrosis, otitis media, otitis external or HIV infection, or
CC   for treating an individual suffering from or at risk for a disease or
CC   disorder involving unwanted protease activity. The proteins are useful
CC   for treating dermatological diseases such as atopic dermatitis, eczema
CC   and psoriasis, in inflammatory responses to viral infection, and for
CC   treating herpes infection, corneal or epidermal ulceration, chronic
CC   non-healing wounds, sepsis, rheumatoid arthritis, periodontal disease,
CC   tumour metastasis and tumour angiogenesis, gastric ulceration,
CC   osteoporosis, Paget's disease, glomerulonephritis, scleroderma, malaria,
CC   bacterial infection, Alzheimer's disease, hypertension and muscular
CC   dystrophy. The present sequence represents the DNA encoding the
CC   rTAP1 fusion protein of the invention.
XX
SQ   Sequence 1756 BP; 493 A; 394 C; 374 G; 495 T; 0 other;

  Query Match           78.1%;  Score 1191.4;  DB 24;  Length 1756;
  Best Local Similarity 99.5%;  Pred. No. 2e-289;
  Matches 1195;  Conservative    0;  Mismatches    6;  Indels    0;  Gaps    0;

Qy    325 TCAAGGCCATGGAAGACCCTCAAGGCGACGCCGCTCAAAAAACCGACACCAGTCATCACG 384
          || || ||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      1 TCTAGACCATGGAAGACCCTCAAGGCGACGCCGCTCAAAAAACCGACACCAGTCATCACG 60

Qy    385 ACCAAGACCATCCGACTTTTAATAAAATTACTCCAAATTTAGCCGAATTTGCTTTTTCTT 444
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     61 ACCAAGACCATCCGACTTTTAATAAAATTACTCCAAATTTAGCCGAATTTGCTTTTTCTT 120

Qy    445 TGTATAGACAATTAGCTCATCAAAGTAATTCTACTAACATTTTTTTTAGTCCTGTTTCTA 504
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    121 TGTATAGACAATTAGCTCATCAAAGTAATTCTACTAACATTTTTTTTAGTCCTGTTTCTA 180

Qy    505 TTGCCACTGCTTTCGCCATGTTGAGTTTAGGTACTAAAGCCGATACCCATGACGAGATTT 564
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    181 TTGCCACTGCTTTCGCCATGTTGAGTTTAGGTACTAAAGCCGATACCCATGACGAGATTT 240

Qy    565 TAGAAGGTTTAAACTTTAATTTGACCGAAATCCCAGAAGCCCAAATTCACGAGGGTTTTC 624
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    241 TAGAAGGTTTAAACTTTAATTTGACCGAAATCCCAGAAGCCCAAATTCACGAGGGTTTTC 300

Qy    625 AAGAGTTGTTGAGAACTTTGAATCAACCTGATTCTCAATTGCAATTAACTACTGGTAACG 684
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    301 AAGAGTTGTTGAGAACTTTGAATCAACCTGATTCTCAATTGCAATTAACTACTGGTAACG 360

Qy    685 GTTTATTTTTGTCTGAAGGTTTAAAATTGGTTGACAAATTCCTAGAAGACGTCAAGAAAC 744
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    361 GTTTATTTTTGTCTGAAGGTTTAAAATTGGTTGACAAATTCCTAGAAGACGTCAAGAAAC 420

Qy    745 TATATCATAGTGAGGCTTTTACCGTTAATTTTGGTGATACTGAGGAAGCTAAAAAGCAAA 804
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    421 TATATCATAGTGAGGCTTTTACCGTTAATTTTGGTGATACTGAGGAAGCTAAAAAGCAAA 480

Qy    805 TTAATGATTATGTTGAGAAAGGCACCCAGGGTAAGATCGTTGACCTAGTTAAAGAATTAG 864
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    481 TTAATGATTATGTTGAGAAAGGCACCCAGGGTAAGATCGTTGACCTAGTTAAAGAATTAG 540

Qy    865 ATCGTGATACCGTCTTCGCACTAGTTAACTATATTTTTTTCAAGGGTAAGTGGGAACGTC 924
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    541 ATCGTGATACCGTCTTCGCACTAGTTAACTATATTTTTTTCAAGGGTAAGTGGGAACGTC 600

Qy    925 CTTTCGAGGTTAAAGATACTGAAGAGGAAGATTTTCATGTTGATCAAGTTACTACTGTCA 984
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    601 CTTTCGAGGTTAAAGATACTGAAGAGGAAGATTTTCATGTTGATCAAGTTACTACTGTCA 660

Qy    985 AAGTTCCAATGATGAAAAGACTGGGTATGTTCAATATTCAACATTGCAAAAAATTAAGTT 1044
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    661 AAGTTCCAATGATGAAAAGACTGGGTATGTTCAATATTCAACATTGCAAAAAATTAAGTT 720

Qy   1045 CTTGGGTCTTATTAATGAAGTATTTAGGTAACGCTACTGCTATTTTTTTTTTTACCAGACG 1104
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    721 CTTGGGTCTTATTAATGAAGTATTTAGGTAACGCTACTGCTATTTTTTTTTTTACCAGACG 780

Qy   1105 AAGGTAAGCTTCAACATTTAGAGAATGAGTTGACTCATGACATTATTACTAAATTTTTAG 1164
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    781 AAGGTAAGCTTCAACATTTAGAGAATGAGTTGACTCATGACATTATTACTAAATTTTTAG 840

Qy   1165 AGAACGAGGATCGTCGTAGCGCTTCTCTGCACCTGCCAAAGTTAAGTATCACCGGTACTT 1224
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    841 AGAACGAGGATCGTCGTAGCGCTTCTCTGCACCTGCCAAAGTTAAGTATCACCGGTACTT 900

Qy   1225 ACGACTTAAAATCTGTTTTAGGCCAGTTAGGTATTACCAAAGTTTTTTCTAACGGTGCCG 1284
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    901 ACGACTTAAAATCTGTTTTAGGCCAGTTAGGTATTACCAAAGTTTTTTCTAACGGTGCCG 960

Qy   1285 ATTTGAGTGGTGTTACTGAAGAAGCTCCATTAAAATTGAGTAAAGCTGTTCACAAAGCCG 1344
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    961 ATTTGAGTGGTGTTACTGAAGAAGCTCCATTAAAATTGAGTAAAGCTGTTCACAAAGCCG 1020

Qy   1345 TCTTAACTATTGATGAAAAGGGTACCGAGGCCGCCGGCGCTATGTTCCTGGAAGCTATTC 1404
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    1021 TCTTAACTATTGATGAAAAGGGTACCGAGGCCGCCGGCGCTATGTTCCTGGAAGCTATTC 1080

Qy   1405 CAATGAGCATTCCACCAGAAGTTAAATTTAATAAACCATTCGTTTTTCTGATGATCGAGC 1464
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    1081 CAATGAGCATTCCACCAGAAGTTAAATTTAATAAACCATTCGTTTTTCTGATGATCGAGC 1140

Qy   1465 AGAACACTAAAAGCCCATTGTTTATGGGTAAGGTTGTCAACCCAACTCAGAAGTAGTCGA 1524
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||  ||  |
Db    1141 AGAACACTAAAAGCCCATTGTTTATGGGTAAGGTTGTCAACCCAACTCAGAAGATGTGCA 1200

Qy   1525 C 1525
          |
Db   1201 C 1201


RESULT 7
ABK88015
ID   ABK88015 standard; DNA; 1182 BP.
XX
AC   ABK88015;
XX
DT   07-OCT-2002  (first entry)
XX
DE   DNA encoding human alpha-1-antitrypsin (AAT) protein.
XX
KW   Alpha-1-antitrypsin; AAT; human; gene; ds; protease inhibitor; malaria;
KW   emphysema; asthma; chronic obstructive pulmonary disease; eczema;
KW   cystic fibrosis; otitis media; otitis external; HIV; psoriasis;
KW   human immunodeficiency virus; atopic dermatitis; muscular dystrophy;
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KW   herpes; ulceration; sepsis; rheumatoid arthritis; periodontal disease;
KW   tumour metastasis; tumour angiogenesis; osteoporosis; Paget's disease;
KW   glomerulonephritis; scleroderma; Alzheimer's disease; hypertension.
XX
OS   Homo sapiens.
XX
FH   Key             Location/Qualifiers
FT   CDS             1..1182
FT                   /*tag= a
FT                   /product= "Alpha-1-antitrypsin"
FT                   /partial
FT                   /note= "No start or stop codon shown"
XX
PN   WO200250287-A2.
XX
PD   27-JUN-2002.
XX
PF   18-DEC-2001; 2001WO-US49256.
XX
PR   18-DEC-2000; 2000US-256699P.
PR   20-NOV-2001; 2001US-331966P.
XX
PA   (ARRI-) ARRIVA PHARM INC.
XX
PI   Barr PJ, Gibson HL, Pemberton P;
XX
DR   WPI; 2002-500631/53.
DR   P-PSDB; AAU99873.
XX
PT   Novel fusion protein useful for inhibiting protease activity associated
PT   with a disorder such as emphysema, asthma, comprises a first protease
PT   inhibitor comprising alpha 1-antitrypsin and a second protease
PT   inhibitor -
XX
PS   Disclosure; Page 24-25; 134pp; English.
XX
CC   This invention relates to a novel fusion protein comprising a first
CC   protease inhibitor comprising an alphal-antitrypsin or its functionally
CC   active portion and a second protease inhibitor or its functionally
CC   active protein. The fusion proteins of the invention may act as an
CC   inhibitor of protease activity. The fusion protein of the invention
CC   is useful for inhibiting protease activity associated with a disorder
CC   such as emphysema, asthma, chronic obstructive pulmonary disease,
CC   cystic fibrosis, otitis media, otitis external or HIV infection, or
CC   for treating an individual suffering from or at risk for a disease or
CC   disorder involving unwanted protease activity. The proteins are useful
CC   for treating dermatological diseases such as atopic dermatitis, eczema
CC   and psoriasis, in inflammatory responses to viral infection, and for
CC   treating herpes infection, corneal or epidermal ulceration, chronic
CC   non-healing wounds, sepsis, rheumatoid arthritis, periodontal disease,
CC   tumour metastasis and tumour angiogenesis, gastric ulceration,
CC   osteoporosis, Paget's disease, glomerulonephritis, scleroderma, malaria,
CC   bacterial infection, Alzheimer's disease, hypertension and muscular
CC   dystrophy. The present sequence represents the DNA encoding the human
CC   alpha-1-antitrypsin (AAT) protein used to create the fusion protein
CC   of the invention.
XX
SQ   Sequence 1182 BP; 369 A; 214 C; 229 G; 370 T; 0 other;

  Query Match             77.5%;  Score 1182;  DB 24;  Length 1182;
  Best Local Similarity   100.0%;  Pred. No. 4e-287;
  Matches 1182;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy     336 GAAGACCCTCAAGGCGACGCCGCTCAAAAAACCGACACCAGTCATCACGACCAAGACCAT 395
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       1 GAAGACCCTCAAGGCGACGCCGCTCAAAAAACCGACACCAGTCATCACGACCAAGACCAT 60

Qy     396 CCGACTTTTAATAAAATTACTCCAAATTTAGCCGAATTTGCTTTTTCTTTGTATAGACAA 455
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      61 CCGACTTTTAATAAAATTACTCCAAATTTAGCCGAATTTGCTTTTTCTTTGTATAGACAA 120

Qy     456 TTAGCTCATCAAAGTAATTCTACTAACATTTTTTTTAGTCCTGTTTCTATTGCCACTGCT 515
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     121 TTAGCTCATCAAAGTAATTCTACTAACATTTTTTTTAGTCCTGTTTCTATTGCCACTGCT 180

Qy     516 TTCGCCATGTTGAGTTTAGGTACTAAAGCCGATACCCATGACGAGATTTTAGAAGGTTTA 575
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     181 TTCGCCATGTTGAGTTTAGGTACTAAAGCCGATACCCATGACGAGATTTTAGAAGGTTTA 240

Qy     576 AACTTTAATTTGACCGAAATCCCAGAAGCCCAAATTCACGAGGGTTTTCAAGAGTTGTTG 635
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     241 AACTTTAATTTGACCGAAATCCCAGAAGCCCAAATTCACGAGGGTTTTCAAGAGTTGTTG 300

Qy     636 AGAACTTTGAATCAACCTGATTCTCAATTGCAATTAACTACTGGTAACGGTTTATTTTTG 695
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     301 AGAACTTTGAATCAACCTGATTCTCAATTGCAATTAACTACTGGTAACGGTTTATTTTTG 360

Qy     696 TCTGAAGGTTTAAAATTGGTTGACAAATTCCTAGAAGACGTCAAGAAACTATATCATAGT 755
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     361 TCTGAAGGTTTAAAATTGGTTGACAAATTCCTAGAAGACGTCAAGAAACTATATCATAGT 420

Qy     756 GAGGCTTTTACCGTTAATTTTGGTGATACTGAGGAAGCTAAAAAGCAAATTAATGATTAT 815
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     421 GAGGCTTTTACCGTTAATTTTGGTGATACTGAGGAAGCTAAAAAGCAAATTAATGATTAT 480

Qy     816 GTTGAGAAAGGCACCCAGGGTAAGATCGTTGACCTAGTTAAAGAATTAGATCGTGATACC 875
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     481 GTTGAGAAAGGCACCCAGGGTAAGATCGTTGACCTAGTTAAAGAATTAGATCGTGATACC 540

Qy     876 GTCTTCGCACTAGTTAACTATATTTTTTTCAAGGGTAAGTGGGAACGTCCTTTCGAGGTT 935
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     541 GTCTTCGCACTAGTTAACTATATTTTTTTCAAGGGTAAGTGGGAACGTCCTTTCGAGGTT 600

Qy     936 AAAGATACTGAAGAGGAAGATTTTCATGTTGATCAAGTTACTACTGTCAAAGTTCCAATG 995
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     601 AAAGATACTGAAGAGGAAGATTTTCATGTTGATCAAGTTACTACTGTCAAAGTTCCAATG 660

Qy     996 ATGAAAAGACTGGGTATGTTCAATATTCAACATTGCAAAAAATTAAGTTCTTGGGTCTTA 1055
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     661 ATGAAAAGACTGGGTATGTTCAATATTCAACATTGCAAAAAATTAAGTTCTTGGGTCTTA 720

Qy    1056 TTAATGAAGTATTTAGGTAACGCTACTGCTATTTTTTTTTTTACCAGACGAAGGTAAGCTT 1115
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     721 TTAATGAAGTATTTAGGTAACGCTACTGCTATTTTTTTTTTTACCAGACGAAGGTAAGCTT 780

Qy    1116 CAACATTTAGAGAATGAGTTGACTCATGACATTATTACTAAATTTTTAGAGAACGAGGAT 1175
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     781 CAACATTTAGAGAATGAGTTGACTCATGACATTATTACTAAATTTTTAGAGAACGAGGAT 840

Qy    1176 CGTCGTAGCGCTTCTCTGCACCTGCCAAAGTTAAGTATCACCGGTACTTACGACTTAAAA 1235
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     841 CGTCGTAGCGCTTCTCTGCACCTGCCAAAGTTAAGTATCACCGGTACTTACGACTTAAAA 900

Qy    1236 TCTGTTTTAGGCCAGTTAGGTATTACCAAAGTTTTTTCTAACGGTGCCGATTTGAGTGGT 1295
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     901 TCTGTTTTAGGCCAGTTAGGTATTACCAAAGTTTTTTCTAACGGTGCCGATTTGAGTGGT 960

Qy    1296 GTTACTGAAGAAGCTCCATTAAAATTGAGTAAAGCTGTTCACAAAGCCGTCTTAACTATT 1355
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     961 GTTACTGAAGAAGCTCCATTAAAATTGAGTAAAGCTGTTCACAAAGCCGTCTTAACTATT 1020

Qy    1356 GATGAAAAGGGTACCGAGGCCGCCGGCGCTATGTTCCTGGAAGCTATTCCAATGAGCATT 1415
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    1021 GATGAAAAGGGTACCGAGGCCGCCGGCGCTATGTTCCTGGAAGCTATTCCAATGAGCATT 1080

Qy    1416 CCACCAGAAGTTAAATTTAATAAACCATTCGTTTTTCTGATGATCGAGCAGAACACTAAA 1475
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    1081 CCACCAGAAGTTAAATTTAATAAACCATTCGTTTTTCTGATGATCGAGCAGAACACTAAA 1140

Qy    1476 AGCCCATTGTTTATGGGTAAGGTTGTCAACCCAACTCAGAAG 1517
           |||||||||||||||||||||||||||||||||||||||||||
Db    1141 AGCCCATTGTTTATGGGTAAGGTTGTCAACCCAACTCAGAAG 1182


RESULT 8
AAV41730
```

```
ID   AAV41730 standard; DNA; 1260 BP.
XX
AC   AAV41730;
XX
DT   20-NOV-1998  (first entry)
XX
DE   Codon-optimised RAmy3D signal fused to DNA encoding mature AAT.
XX
KW   Protein expression; monocotyledon plant cell;
KW   glycosylated alpha 1-antitrypsin; AAT; glycosylated antithrombin III;
KW   ATIII; human serum albumin; HSA; subtilisin BPN'; treatment; emphysema;
KW   antithrombotic; blood replacement; ss.
XX
OS   Synthetic.
OS   Homo sapiens.
XX
FH   Key             Location/Qualifiers
FT   misc_feature    1..75
FT                   /*tag=  a
FT                   /note= "codon-optimised RAmy3D signal sequence"
FT   misc_feature    76..1260
FT                   /*tag=  b
FT                   /note= "encodes mature AAT"
XX
PN   WO9836085-A1.
XX
PD   20-AUG-1998.
XX
PF   13-FEB-1998;   98WO-US03068.
XX
PR   13-FEB-1997;   97US-0038170.
PR   13-FEB-1997;   97US-0037991.
PR   13-FEB-1997;   97US-0038168.
PR   13-FEB-1997;   97US-0038169.
XX
PA   (PHYT-) APPLIED PHYTOLOGICS INC.
XX
PI   Rodriguez RL,  Sutliff TD;
XX
DR   WPI; 1998-467179/40.
XX
PT   Expressing mature, glycosylated proteins in monocotyledonous plant
PT   cells - from chimeric gene including signal peptide sequence,
PT   specifically therapeutic agents and industrial enzymes
XX
PS   Disclosure; Pages 34 iii-iv; 53pp; English.
XX
CC   The present sequence encodes a fusion protein of codon-optimised RAmy3D
CC   signal sequence/mature alpha1-antitrypsin (AAT). The protein is used
CC   to exemplify the invention. The specification describes a method for
CC   producing mature heterologous protein in monocotyledonous plant cells.
CC   The method comprises transforming the cells with a chimeric gene
CC   comprising a monocotyledon transcription regulator, inducible either
CC   during seed maturation or by adding/removing a small molecule, DNA
CC   encoding the heterologous protein, and DNA encoding a signal peptide,
CC   with the signal peptide causing secretion of the protein from the cell.
CC   Proteins expressed in this manner include mature glycosylated alpha
CC   1-antitrypsin (AAT) with a glycosylation pattern that significantly
CC   increases its serum half-life, mature glycosylated antithrombin III
CC   (ATIII), mature human serum albumin (HSA) having the native folding
CC   pattern as shown by bilirubin-binding characteristics, or mature active
CC   subtilisin BPN'. These proteins are useful therapeutically (e.g. AAT for
CC   treating emphysema, ATIII as antithrombotic and HSA as blood replacement)
CC   or as industrial enzymes (BPN' is used in detergents).
XX
SQ   Sequence 1260 BP; 287 A; 428 C; 350 G; 195 T; 0 other;

  Query Match             41.3%;  Score 629.4;  DB 19;  Length 1260;
  Best Local Similarity   70.8%;  Pred. No. 3.2e-148;
  Matches  837;  Conservative    0;  Mismatches  346;  Indels    0;  Gaps    0;

Qy    336 GAAGACCCTCAAGGCGACGCCGCTCAAAAAACCGACACCAGTCATCACGACCAAGACCAT 395
          || ||||| || |||||||||||| || || |||||||||||| || |||||||| |||||

Db     76 GAGGACCCGCAGGGCGACGCCGCCCAGAAGACCGACACCAGCCACCACGACCAGGACCAC 135

Qy    396 CCGACTTTTAATAAAATTACTCCAAATTTAGCCGAATTTGCTTTTTCTTTGTATAGACAA 455
          ||||| || || || || || || ||||| |||||||| || ||     |||| | ||

Db    136 CCGACGTTCAACAAGATCACCCCGAATTTGGCCGAATTCGCCTTCAGCCTGTACCGCCAG 195

Qy    456 TTAGCTCATCAAAGTAATTCTACTAACATTTTTTTTAGTCCTGTTTCTATTGCCACTGCT 515
          | || || ||    || || || ||||| || || || || ||    || ||||| ||

Db    196 CTCGCGCACCAGTCCAACTCCACCAACATCTTCTTCAGCCCGGTGAGCATCGCCACCGCC 255

Qy    516 TTCGCCATGTTGAGTTTAGGTACTAAAGCCGATACCCATGACGAGATTTTAGAAGGTTTA 575
          ||||||||| ||    | ||||| || || || ||||| |||||||  | |||||  |

Db    256 TTCGCCATGCTGTCCCTGGGTACCAAGGCGGACACCCACGACGAGATCCTCGAAGGGCTG 315

Qy    576 AACTTTAATTTGACCGAAATCCCAGAAGCCCAAATTCACGAGGGTTTTCAAGAGTTGTTG 635
          ||||| ||  |||| || ||||| || || || || |||||||| || || ||| || |

Db    316 AACTTCAACCTGACGGAGATCCCGGAGGCGCAGATCCACGAGGGCTTCCAGGAGCTGCTC 375

Qy    636 AGAACTTTGAATCAACCTGATTCTCAATTGCAATTAACTACTGGTAACGGTTTATTTTTG 695
          || ||  | || || || || || ||  | ||  | || || || |||||  | ||  ||

Db    376 AGGACGCTCAACCAGCCGGACTCCCAGCTCCAGCTCACCACCGGCAACGGGCTCTTCCTG 435

Qy    696 TCTGAAGGTTTAAAATTGGTTGACAAATTCCTAGAAGACGTCAAGAAACTATATCATAGT 755
          || || ||  | ||  | || || || ||||| || ||||| ||||| || || ||

Db    436 TCCGAGGGCCTCAAGCTCGTCGATAAGTTCCTGGAGGACGTGAAGAAGCTCTACCACTCC 495

Qy    756 GAGGCTTTTACCGTTAATTTTGGTGATACTGAGGAAGCTAAAAAGCAAATTAATGATTAT 815
          ||||| || ||||| || || || || || ||||| || || ||||| || || || ||

Db    496 GAGGCGTTCACCGTCAACTTCGGGGACACCGAGGAGGCCAAGAAGCAGATCAACGACTAC 555

Qy    816 GTTGAGAAAGGCACCCAGGGTAAGATCGTTGACCTAGTTAAAGAATTAGATCGTGATACC 875
          || ||||| || |||||||| |||||||| ||||| || || ||||| ||  | || |||

Db    556 GTCGAGAAGGGGACCCAGGGCAAGATCGTGGACCTGGTCAAGGAATTGGACAGGGACACC 615

Qy    876 GTCTTCGCACTAGTTAACTATATTTTTTTCAAGGGTAAGTGGGAACGTCCTTTCGAGGTT 935
          |||||||| || || ||||| || || |||||||| |||||||| || || |||||||||

Db    616 GTCTTCGCGCTCGTCAACTACATCTTCTTCAAGGGCAAGTGGGAGCGCCCGTTCGAGGTG 675

Qy    936 AAAGATACTGAAGAGGAAGATTTTCATGTTGATCAAGTTACTACTGTCAAAGTTCCAATG 995
          || || || || ||||| || || || || || || || || || || ||||| || || |||

Db    676 AAGGACACCGAGGAGGAGGACTTCCACGTCGACCAGGTCACCACCGTCAAGGTCCCGATG 735

Qy    996 ATGAAAAGACTGGGTATGTTCAATATTCAACATTGCAAAAAATTAAGTTCTTGGGTCTTA 1055
          ||||| || || || |||||||| || || || ||||| ||  |       |||||  |

Db    736 ATGAAGAGGCTCGGCATGTTCAACATCCAGCACTGCAAGAAGCTCTCCAGCTGGGTGCTC 795

Qy   1056 TTAATGAAGTATTTAGGTAACGCTACTGCTATTTTTTTTTTACCAGACGAAGGTAAGCTT 1115
          | ||||||||  | || ||||| || || || || ||  | || ||||| || |||||

Db    796 CTCATGAAGTACCTGGGGAACGCCACCGCCATCTTCTTCCTGCCGGACGAGGGCAAGCTC 855

Qy   1116 CAACATTTAGAGAATGAGTTGACTCATGACATTATTACTAAATTTTTAGAGAACGAGGAT 1175
          || ||  | ||||| ||| |||| || ||||| || || || ||  | ||||||||||||

Db    856 CAGCACCTGGAGAACGAGCTGACGCACGACATCATCACGAAGTTCCTGGAGAACGAGGAC 915

Qy   1176 CGTCGTAGCGCTTCTCTGCACCTGCCAAAGTTAAGTATCACCGGTACTTACGACTTAAAA 1235
          | ||  ||||  || ||||| || ||| | || |||||||| || |||||| | ||

Db    916 AGGCGCTCCGCTAGCCTCCACCTCCCGAAGCTGAGCATCACCGGCACGTACGACCTGAAG 975

Qy   1236 TCTGTTTTAGGCCAGTTAGGTATTACCAAAGTTTTTTCTAACGGTGCCGATTTGAGTGGT 1295
            ||  | |||||| | || || || || || ||    ||||| || ||  |    ||

Db    976 AGCGTGCTGGGCCAGCTGGGCATCACGAAGGTCTTCAGCAACGGCGCGGACCTCTCCGGC 1035

Qy   1296 GTTACTGAAGAAGCTCCATTAAAATTGAGTAAAGCTGTTCACAAAGCCGTCTTAACTATT 1355
          || || || || || ||  | ||  |    || || || ||||| || ||  | || ||

Db   1036 GTGACGGAGGAGGCCCCCCTGAAGCTCTCCAAGGCCGTGCACAAGGCGGTGCTCACGATC 1095

Qy   1356 GATGAAAAGGGTACCGAGGCCGCCGGCGCTATGTTCCTGGAAGCTATTCCAATGAGCATT 1415
          || || ||||| || || || |||||| || |||||||||||| || || || |||  |||

Db   1096 GACGAGAAGGGGACGGAAGCTGCCGGGGCCATGTTCCTGGAGGCCATCCCCATGTCCATC 1155

Qy   1416 CCACCAGAAGTTAAATTTAATAAACCATTCGTTTTTCTGATGATCGAGCAGAACACTAAA 1475
          || || || || || || || || ||||| || ||||||||||||||||||||  ||

Db   1156 CCGCCCGAGGTCAAGTTCAACAAGCCCTTCGTCTTCCTGATGATCGAGCAGAACACGAAG 1215
```

```
Qy   1476 AGCCCATTGTTTATGGGTAAGGTTGTCAACCCAACTCAGAAGT 1518
          |||||  | || ||||| ||||| |||||||| || |||||||
Db   1216 AGCCCCCTCTTCATGGGGAAGGTCGTCAACCCCACGCAGAAGT 1258


RESULT 9
AAQ89254
ID   AAQ89254 standard; cDNA; 1312 BP.
XX
AC   AAQ89254;
XX
DT   18-OCT-1995  (first entry)
XX
DE   Human alpha-1-trypsin cDNA.
XX
KW   Alpha-1-trypsin; protease-inhibitor; ss.
XX
OS   Homo sapiens.
XX
FH   Key             Location/Qualifiers
FT   CDS             28..1258
FT                   /*tag= a
FT   sig_peptide     28..99
FT                   /*tag= b
FT   mat_peptide     100..1255
FT                   /*tag= c
XX
PN   US5399684-A.
XX
PD   21-MAR-1995.
XX
PF   20-MAY-1982;    82US-0380310.
XX
PR   20-MAY-1982;    82US-0380310.
PR   07-FEB-1984;    84US-0638980.
PR   03-MAR-1987;    87US-0022543.
PR   15-DEC-1987;    87US-0133190.
PR   16-SEP-1988;    88US-0246912.
PR   22-AUG-1989;    89US-0398288.
PR   11-MAR-1991;    91US-0666450.
PR   18-NOV-1992;    92US-0979556.
PR   02-JUL-1993;    93US-0086442.
XX
PA   (WASH-) WASHINGTON RES FOUND.
XX
PI   Davie EW,  Kurachi K,  Thirumalachary C,  Woo SLC;
XX
DR   WPI; 1995-130740/17.
DR   P-PSDB; AAR71969.
XX
PT   Human alpha1-antitrypsin (a1-AT) cDNA sequence - can be used for
PT   the expression of a1-AT
XX
PS   Claim 1; Fig.1; 15pp; English.
XX
CC   The sequence of a human alpha-1-antitrypsin cDNA clone is given in
CC   AAQ89254.  Expression of the cDNA in host cell transformants has
CC   allowed production of recombinant alpha-1-antitrypsin.
XX
SQ   Sequence 1312 BP; 339 A; 368 C; 324 G; 281 T; 0 other;

  Query Match             28.6%;  Score 436.4;  DB 16;  Length 1312;
  Best Local Similarity   59.8%;  Pred. No. 1.1e-99;
  Matches  731;  Conservative    0;  Mismatches  491;  Indels    0;  Gaps    0;

Qy    298 TGTGTGGTAAGTCCTGTGTTTCCCCAGTCAAGGCCATGGAAGACCCTCAAGGCGACGCCG 357
          ||   ||   || |||  |   ||| |||         || || || || || || || | |
Db     62 TGGCAGGCCTGTGCTGCCTGGTCCCTGTCTCCCTGGCTGAGGATCCCCAGGGAGATGCTG 121

Qy    358 CTCAAAAAACCGACACCAGTCATCACGACCAAGACCATCCGACTTTTAATAAAATTACTC 417
          | || || || || ||    || || || || || || || || || || || || || |
Db    122 CCCAGAAGACAGATACATCCCACCATGATCAGGATCACCCAACCTTCAACAAGATCACCC 181

Qy    418 CAAATTTAGCCGAATTTGCTTTTTCTTTGTATAGACAATTAGCTCATCAAAGTAATTCTA 477
          | || || || || || || || ||      | ||  | ||  | || || ||    ||   |
Db    182 CCAACTTGGCTGAGTTCGCCTTCAGCCTATACCGCCAGCTGGCACACCAGTCCAACAGCA 241

Qy    478 CTAACATTTTTTTTAGTCCTGTTTCTATTGCCACTGCTTTCGCCATGTTGAGTTTAGGTA 537
          | || || || ||    || ||    || || || || || || ||| |     | || |
Db    242 CCAATATCTTCTTCTCCCCAGTGAGCATCGCTACAGCCTTTGCAATGCTCTCCCTGGGGA 301

Qy    538 CTAAAGCCGATACCCATGACGAGATTTTAGAAGGTTTAAACTTTAATTTGACCGAAATCC 597
          | || || || || || || || || || || | || ||  | || || || | || || || |
Db    302 CCAAGGCTGACACTCACGATGAAATCCTGGAGGGCCTGAATTTCAACCTCACGGAGATTC 361

Qy    598 CAGAAGCCCAAATTCACGAGGGTTTTCAAGAGTTGTTGAGAACTTTGAATCAACCTGATT 657
          | || || || || || || || || || || |  |  | || | || || || ||
Db    362 CGGAGGCTCAGATCCATGAAGGCTTCCAGGAACTCCTCCGTACCCTCAACCAGCCAGACA 421

Qy    658 CTCAATTGCAATTAACTACTGGTAACGGTTTATTTTTGTCTGAAGGTTTAAAATTGGTTG 717
            ||  | ||  | || || || || || || | ||  |    || ||  | ||  | || |
Db    422 GCCAGCTCCAGCTGACCACCGGCAATGGCCTGTTCCTCAGCGAGGGCCTGAAGCTAGTGG 481

Qy    718 ACAAATTCCTAGAAGACGTCAAGAAACTATATCATAGTGAGGCTTTTACCGTTAATTTTG 777
          | || ||  | || || || || ||  | || ||    || || || || || || || | |
Db    482 ATAAGTTTTTGGAGGATGTTAAAAAGTTGTACCACTCAGAAGCCTTCACTGTCAACTTCG 541

Qy    778 GTGATACTGAGGAAGCTAAAAAGCAAATTAATGATTATGTTGAGAAAGGCACCCAGGGTA 837
          | || || || || || || || || || || || ||||| || ||||| || || || || |
Db    542 GGGACACCGAAGAGGCCAAGAAACAGATCAACGATTACGTGGAGAAGGGTACTCAAGGGA 601

Qy    838 AGATCGTTGACCTAGTTAAAGAATTAGATCGTGATACCGTCTTCGCACTAGTTAACTATA 897
          | || || ||  | || || ||  | ||  | || || || || || || || || || | |
Db    602 AAATTGTGGATTTGGTCAAGGAGCTTGACAGAGACACAGTTTTTGCTCTGGTGAATTACA 661

Qy    898 TTTTTTTCAAGGGTAAGTGGGAACGTCCTTTCGAGGTTAAAGATACTGAAGAGGAAGATT 957
          | || || || || || ||||||  | || || || || || || || || || || || | |
Db    662 TCTTCTTTAAAGGCAAATGGGAGAGACCCTTTGAAGTCAAGGACACCGAGGAAGAGGACT 721

Qy    958 TTCATGTTGATCAAGTTACTACTGTCAAAGTTCCAATGATGAAAAGACTGGGTATGTTCA 1017
          | || || || || || || || || || || || || ||||||||  |  | || ||||| |
Db    722 TCCACGTGGACCAGGTGACCACCGTGAAGGTGCCTATGATGAAGCGTTTAGGCATGTTTA 781

Qy   1018 ATATTCAACATTGCAAAAAATTAAGTTCTTGGGTCTTATTAATGAAGTATTTAGGTAACG 1077
          | || || ||||| || ||  |        |||||  |  | ||||| ||  | || || |
Db    782 ACATCCAGCATTGTAAGAAGCTGTCCAGCTGGGTGCTGCTGATGAAATACCTGGGCAATG 841

Qy   1078 CTACTGCTATTTTTTTTTTACCAGACGAAGGTAAGCTTCAACATTTAGAGAATGAGTTGA 1137
          | || || || || ||  | || || || || || || || ||  | || |||||  | |
Db    842 CCACCGCCATCTTCTTCCTGCCTGATGAGGGGAAACTACAGCACCTGGAAAATGAACTCA 901

Qy   1138 CTCATGACATTATTACTAAATTTTTAGAGAACGAGGATCGTCGTAGCGCTTCTCTGCACC 1197
          | || || || || || || ||  | || || || ||  |  |    ||     | ||
Db    902 CCCACGATATCATCACCAAGTTCCTGGAAAATGAAGACAGAAGGTCTGCCAGCTTACATT 961

Qy   1198 TGCCAAAGTTAAGTATCACCGGTACTTACGACTTAAAATCTGTTTTAGGCCAGTTAGGTA 1257
          | || ||  |    || || || || || || || | ||    ||  |||| ||  | || |
Db    962 TACCCAAACTGTCCATTACTGGAACCTATGATCTGAAGAGCGTCCTAGGTCAACTGGGCA 1021

Qy   1258 TTACCAAAGTTTTTTCTAACGGTGCCGATTTGAGTGGTGTTACTGAAGAAGCTCCATTAA 1317
          | || || || ||    || || || || ||  |    || || || || || || ||  | |
Db   1022 TCACTAAGGTCTTCAGCAATGGGGCTGACCTCTCCGGGGTCACAGAGGAGGCACCCCTGA 1081

Qy   1318 AATTGAGTAAAGCTGTTCACAAAGCCGTCTTAACTATTGATGAAAAGGGTACCGAGGCCG 1377
          |  |    || || || || || || || ||  | || || || || || || || || | |
Db   1082 AGCTCTCCAAGGCCGTGCATAAGGCTGTGCTGACCATCGACGAGAAAGGGACTGAAGCTG 1141

Qy   1378 CCGGCGCTATGTTCCTGGAAGCTATTCCAATGAGCATTCCACCAGAAGTTAAATTTAATA 1437
          | || || ||||| | || || || || ||| || |  || || || || || || || | |
Db   1142 CTGGGGCCATGTTTTTAGAGGCCATACCCATGTCTATCCGCCCCGAGGTCAAGTTCAACA 1201

Qy   1438 AACCATTCGTTTTTCTGATGATCGAGCAGAACACTAAAAGCCCATTGTTTATGGGTAAGG 1497
          |||| || || ||  | |||| || || || || || ||    ||  | || |||| || |
Db   1202 AACCCTTTGTCTTCTTAATGATTGAACAAAATACCAAGTCTCCCCTCTTCATGGGAAAAG 1261
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Qy   1498 TTGTCAACCCAACTCAGAAGTA 1519
          | || || || || || || ||
Db   1262 TGGTGAATCCCACCCAAAAATA 1283


RESULT 10
AAV28471
ID   AAV28471 standard; cDNA; 1312 BP.
XX
AC   AAV28471;
XX
DT   21-AUG-1998  (first entry)
XX
DE   Nucleotide sequence of the alpha-1-antitrypsin.
XX
KW   Human alpha-1-antitrypsin; ATR-1; antibody; ATR-1 deficiency; ss.
XX
OS   Homo sapiens.
XX
FH   Key             Location/Qualifiers
FT   CDS             28..1257
FT                   /*tag= a
FT                   /product= "alpha-1-antitrypsin"
XX
PN   US5736379-A.
XX
PD   07-APR-1998.
XX
PF   07-JUN-1995;   95US-0479545.
XX
PR   20-MAY-1982;   82US-0380310.
PR   07-FEB-1984;   84US-0638980.
PR   03-MAR-1987;   87US-0022543.
PR   15-DEC-1987;   87US-0133190.
PR   16-SEP-1988;   88US-0246912.
PR   22-AUG-1989;   89US-0398288.
PR   11-MAR-1991;   91US-0666450.
PR   18-NOV-1992;   92US-0979556.
PR   02-JUL-1993;   93US-0086442.
PR   12-DEC-1994;   94US-0361689.
XX
PA   (WASH-) WASHINGTON RES FOUND.
XX
PI   Davie EW,  Kurachi K,  Thirumalachary C,  Woo SLC;
XX
DR   WPI; 1998-239214/21.
DR   P-PSDB; AAW56709.
XX
PT   DNA encoding alpha-1 anti-trypsin - useful for, e.g. producing
PT   recombinant alpha-1 anti-trypsin
XX
PS   Claim 1; Fig 1; 15pp; English.
XX
CC   This is the nucleotide sequence encoding the novel human
CC   alpha-1-antitrypsin (ATR-1) protein.  Its products are useful for
CC   producing recombinant ATR-1 polypeptides, which can be used to prepare
CC   antibodies for detecting ATR-1 variants in the blood, as ligands in
CC   assays for ATR-1, and to treat ATR-1 deficiency.
XX
SQ   Sequence 1312 BP; 339 A; 368 C; 324 G; 281 T; 0 other;

  Query Match             28.6%;  Score 436.4;  DB 19;  Length 1312;
  Best Local Similarity   59.8%;  Pred. No. 1.1e-99;
  Matches  731;  Conservative    0;  Mismatches  491;  Indels    0;  Gaps    0;

Qy     298 TGTGTGGTAAGTCCTGTGTTTCCCCAGTCAAGGCCATGGAAGACCCTCAAGGCGACGCCG 357
           ||   ||   || |||  |   ||| |||         || || || || || || || |
Db      62 TGGCAGGCCTGTGCTGCCTGGTCCCTGTCTCCCTGGCTGAGGATCCCCAGGGAGATGCTG 121

Qy     358 CTCAAAAAACCGACACCAGTCATCACGACCAAGACCATCCGACTTTTAATAAAATTACTC 417
           | || || || || ||   || || || || || || || || || || || || || | |
Db     122 CCCAGAAGACAGATACATCCCACCATGATCAGGATCACCCAACCTTCAACAAGATCACCC 181

Qy     418 CAAATTTAGCCGAATTTGCTTTTTCTTTGTATAGACAATTAGCTCATCAAAGTAATTCTA 477
           | || || || || || || ||     | ||  | ||  | || || ||    ||    |
Db     182 CCAACTTGGCTGAGTTCGCCTTCAGCCTATACCGCCAGCTGGCACACCAGTCCAACAGCA 241

Qy     478 CTAACATTTTTTTTAGTCCTGTTTCTATTGCCACTGCTTTCGCCATGTTGAGTTTAGGTA 537
           | || || || ||    || ||    || || || || || || ||| |    | || |
Db     242 CCAATATCTTCTTCTCCCCAGTGAGCATCGCTACAGCCTTTGCAATGCTCTCCCTGGGGA 301

Qy     538 CTAAAGCCGATACCCATGACGAGATTTTAGAAGGTTTAAACTTTAATTTGACCGAAATCC 597
           | || || || || || || || || ||  | || ||  | || || ||  | || || || |
Db     302 CCAAGGCTGACACTCACGATGAAATCCTGGAGGGCCTGAATTTCAACCTCACGGAGATTC 361

Qy     598 CAGAAGCCCAAATTCACGAGGGTTTTCAAGAGTTGTTGAGAACTTTGAATCAACCTGATT 657
           | || || || || || || || || || || ||  |  |  | ||  | || || || ||
Db     362 CGGAGGCTCAGATCCATGAAGGCTTCCAGGAACTCCTCCGTACCCTCAACCAGCCAGACA 421

Qy     658 CTCAATTGCAATTAACTACTGGTAACGGTTTATTTTTGTCTGAAGGTTTAAAATTGGTTG 717
             ||  | ||  | || || || || ||  | ||  |    || ||  | ||  | || |
Db     422 GCCAGCTCCAGCTGACCACCGGCAATGGCCTGTTCCTCAGCGAGGGCCTGAAGCTAGTGG 481

Qy     718 ACAAATTCCTAGAAGACGTCAAGAAACTATATCATAGTGAGGCTTTTACCGTTAATTTTG 777
           | || ||  | || || || || || ||  | || ||    || || || || || || || |
Db     482 ATAAGTTTTTGGAGGATGTTAAAAAGTTGTACCACTCAGAAGCCTTCACTGTCAACTTCG 541

Qy     778 GTGATACTGAGGAAGCTAAAAAGCAAATTAATGATTATGTTGAGAAAGGCACCCAGGGTA 837
           | || || || || || || || || || || || ||||| || ||||| || || || || |
Db     542 GGGACACCGAAGAGGCCAAGAAACAGATCAACGATTACGTGGAGAAGGGTACTCAAGGGA 601

Qy     838 AGATCGTTGACCTAGTTAAAGAATTAGATCGTGATACCGTCTTCGCACTAGTTAACTATA 897
           | || || ||  | || || ||  | ||  | || || || || || || || || || |
Db     602 AAATTGTGGATTTGGTCAAGGAGCTTGACAGAGACACAGTTTTTGCTCTGGTGAATTACA 661

Qy     898 TTTTTTTCAAGGGTAAGTGGGAACGTCCTTTCGAGGTTAAAGATACTGAAGAGGAAGATT 957
           | || || || || || ||||  | || || || || || || || || || || || || |
Db     662 TCTTCTTTAAAGGCAAATGGGAGAGACCCTTTGAAGTCAAGGACACCGAGGAAGAGGACT 721

Qy     958 TTCATGTTGATCAAGTTACTACTGTCAAAGTTCCAATGATGAAAAGACTGGGTATGTTCA 1017
           | || || || || || || || || || || || || |||||||  |  | || |||||
Db     722 TCCACGTGGACCAGGTGACCACCGTGAAGGTGCCTATGATGAAGCGTTTAGGCATGTTTA 781

Qy    1018 ATATTCAACATTGCAAAAAATTAAGTTCTTGGGTCTTATTAATGAAGTATTTAGGTAACG 1077
           | || || |||||  || ||  |       |||||  |  | |||||  ||  | || || |
Db     782 ACATCCAGCATTGTAAGAAGCTGTCCAGCTGGGTGCTGCTGATGAAATACCTGGGCAATG 841

Qy    1078 CTACTGCTATTTTTTTTTTTACCAGACGAAGGTAAGCTTCAACATTTAGAGAATGAGTTGA 1137
           | || || || || || ||  | || || || || || || || || ||  | || |||||  | |
Db     842 CCACCGCCATCTTCTTCCTGCCTGATGAGGGGAAACTACAGCACCTGGAAAATGAACTCA 901

Qy    1138 CTCATGACATTATTACTAAATTTTTAGAGAACGAGGATCGTCGTAGCGCTTCTCTGCACC 1197
           | || || || || || || || ||  | || || || || |  |    ||     | ||
Db     902 CCCACGATATCATCACCAAGTTCCTGGAAAATGAAGACAGAAGGTCTGCCAGCTTACATT 961

Qy    1198 TGCCAAAGTTAAGTATCACCGGTACTTACGACTTAAAATCTGTTTTAGGCCAGTTAGGTA 1257
           | || ||  |    || || || || || || ||  | ||    ||  |||| || | || |
Db     962 TACCCAAACTGTCCATTACTGGAACCTATGATCTGAAGAGCGTCCTAGGTCAACTGGGCA 1021

Qy    1258 TTACCAAAGTTTTTTCTAACGGTGCCGATTTGAGTGGTGTTACTGAAGAAGCTCCATTAA 1317
           | || || || ||    || || || ||  |    || || || || || || || |  |
Db    1022 TCACTAAGGTCTTCAGCAATGGGGCTGACCTCTCCGGGGTCACAGAGGAGGCACCCCTGA 1081

Qy    1318 AATTGAGTAAAGCTGTTCACAAAGCCGTCTTAACTATTGATGAAAAGGGTACCGAGGCCG 1377
           |  |    || || || || || || || ||  | || || || || || || || || |
Db    1082 AGCTCTCCAAGGCCGTGCATAAGGCTGTGCTGACCATCGACGAGAAAGGGACTGAAGCTG 1141

Qy    1378 CCGGCGCTATGTTCCTGGAAGCTATTCCAATGAGCATTCCACCAGAAGTTAAATTTAATA 1437
           | || || |||||  | || || || || |||  || |  || || || || || || || |
Db    1142 CTGGGGCCATGTTTTTAGAGGCCATACCCATGTCTATCCGCCCCGAGGTCAAGTTCAACA 1201

Qy    1438 AACCATTCGTTTTTCTGATGATCGAGCAGAACACTAAAAGCCCATTGTTTATGGGTAAGG 1497
           |||| || || ||  | ||||| || || || || ||    ||  | || ||||| || |
Db    1202 AACCCTTTGTCTTCTTAATGATTGAACAAAATACCAAGTCTCCCCTCTTCATGGGAAAAG 1261

Qy    1498 TTGTCAACCCAACTCAGAAGTA 1519
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Db   1262 TGGTGAATCCCACCCAAAAATA 1283


RESULT 11
AAZ90199
ID   AAZ90199 standard; cDNA; 1312 BP.
XX
AC   AAZ90199;
XX
DT   19-MAY-2000  (first entry)
XX
DE   Human alpha1-antitrypsin nucleotide sequence.
XX
KW   Alpha1-antitrypsin; neutrophil elastase inhibitor; human; ss;
KW   chronic obstructive pulmonary emphysema; infantile liver cirrhosis.
XX
OS   Homo sapiens.
XX
PN   US6025161-A.
XX
PD   15-FEB-2000.
XX
PF   20-JAN-1998;   98US-0009581.
XX
PR   07-JUN-1995;   95US-0479545.
PR   20-MAY-1982;   82US-0380810.
PR   07-FEB-1984;   84US-0638980.
PR   03-MAR-1987;   87US-0022543.
PR   15-DEC-1987;   87US-0133190.
PR   16-SEP-1988;   88US-0246912.
PR   22-AUG-1989;   89US-0398288.
PR   11-MAR-1991;   91US-0666450.
PR   18-NOV-1992;   92US-0979556.
PR   02-JUL-1993;   93US-0086442.
XX
PA   (WASH-) WASHINGTON RES FOUND.
XX
PI   Woo SLC,  Thirumalachary C,  Kurachi K,  Davie EW;
XX
DR   WPI; 2000-181811/16.
DR   P-PSDB; AAY78890.
XX
PT   Preparing alpha1-antitrypsin for inhibiting neutrophil elastase
PT   involves transfecting host cell with vector comprising
PT   alpha1-antitrypsin DNA sequence that hybridizes to human
PT   alpha1-antitrypsin cDNA, or its complement -
XX
PS   Claim 1; Fig 1; 16pp; English.
XX
CC   This sequence represents the human alpha1-antitrypsin nucleotide
CC   sequence. Alpha1-antitrypsin is an important protease inhibitor, the
CC   major function of which is to inhibit neutrophil elastase. Low levels of
CC   alpha1-antitrypsin in the blood are associated with chronic obstructive
CC   pulmonary emphysema and infantile liver cirrhosis. A vector comprising a
CC   mammalian alpha1-antitrypsin DNA sequence that hybridises to human
CC   alpha1-antitrypsin cDNA can be introduced into a host cell in a method
CC   for the production of alpha1-antitrypsin.
XX
SQ   Sequence 1312 BP; 339 A; 368 C; 324 G; 281 T; 0 other;

  Query Match             28.6%;  Score 436.4;  DB 21;  Length 1312;
  Best Local Similarity   59.8%;  Pred. No. 1.1e-99;
  Matches  731;  Conservative    0;  Mismatches  491;  Indels    0;  Gaps    0;

Qy    298 TGTGTGGTAAGTCCTGTGTTTCCCCAGTCAAGGCCATGGAAGACCCTCAAGGCGACGCCG 357
Db     62 TGGCAGGCCTGTGCTGCCTGGTCCCTGTCTCCCTGGCTGAGGATCCCCAGGGAGATGCTG 121

Qy    358 CTCAAAAAACCGACACCAGTCATCACGACCAAGACCATCCGACTTTTAATAAAATTACTC 417
Db    122 CCCAGAAGACAGATACATCCCACCATGATCAGGATCACCCAACCTTCAACAAGATCACCC 181

Qy    418 CAAATTTAGCCGAATTTGCTTTTTCTTTGTATAGACAATTAGCTCATCAAAGTAATTCTA 477
Db    182 CCAACTTGGCTGAGTTCGCCTTCAGCCTATACCGCCAGCTGGCACACCAGTCCAACAGCA 241

Qy    478 CTAACATTTTTTTTAGTCCTGTTTCTATTGCCACTGCTTTCGCCATGTTGAGTTTAGGTA 537
Db    242 CCAATATCTTCTTCTCCCCAGTGAGCATCGCTACAGCCTTTGCAATGCTCTCCCTGGGGA 301

Qy    538 CTAAAGCCGATACCCATGACGAGATTTTAGAAGGTTTAAACTTTAATTTGACCGAAATCC 597
Db    302 CCAAGGCTGACACTCACGATGAAATCCTGGAGGGCCTGAATTTCAACCTCACGGAGATTC 361

Qy    598 CAGAAGCCCAAATTCACGAGGGTTTTCAAGAGTTGTTGAGAACTTTGAATCAACCTGATT 657
Db    362 CGGAGGCTCAGATCCATGAAGGCTTCCAGGAACTCCTCCGTACCCTCAACCAGCCAGACA 421

Qy    658 CTCAATTGCAATTAACTACTGGTAACGGTTTATTTTTGTCTGAAGGTTTAAAATTGGTTG 717
Db    422 GCCAGCTCCAGCTGACCACCGGCAATGGCCTGTTCCTCAGCGAGGGCCTGAAGCTAGTGG 481

Qy    718 ACAAATTCCTAGAAGACGTCAAGAAACTATATCATAGTGAGGCTTTTACCGTTAATTTTG 777
Db    482 ATAAGTTTTTGGAGGATGTTAAAAAGTTGTACCACTCAGAAGCCTTCACTGTCAACTTCG 541

Qy    778 GTGATACTGAGGAAGCTAAAAAGCAAATTAATGATTATGTTGAGAAAGGCACCCAGGGTA 837
Db    542 GGGACACCGAAGAGGCCAAGAAACAGATCAACGATTACGTGGAGAAGGGTACTCAAGGGA 601

Qy    838 AGATCGTTGACCTAGTTAAAGAATTAGATCGTGATACCGTCTTCGCACTAGTTAACTATA 897
Db    602 AAATTGTGGATTTGGTCAAGGAGCTTGACAGAGACACAGTTTTTGCTCTGGTGAATTACA 661

Qy    898 TTTTTTTCAAGGGTAAGTGGGAACGTCCTTTCGAGGTTAAAGATACTGAAGAGGAAGATT 957
Db    662 TCTTCTTTAAAGGCAAATGGGAGAGACCCTTTGAAGTCAAGGACACCGAGGAAGAGGACT 721

Qy    958 TTCATGTTGATCAAGTTACTACTGTCAAAGTTCCAATGATGAAAAGACTGGGTATGTTCA 1017
Db    722 TCCACGTGGACCAGGTGACCACCGTGAAGGTGCCTATGATGAAGCGTTTAGGCATGTTTA 781

Qy   1018 ATATTCAACATTGCAAAAAATTAAGTTCTTGGGTCTTATTAATGAAGTATTTAGGTAACG 1077
Db    782 ACATCCAGCATTGTAAGAAGCTGTCCAGCTGGGTGCTGCTGATGAAATACCTGGGCAATG 841

Qy   1078 CTACTGCTATTTTTTTTTTACCAGACGAAGGTAAGCTTCAACATTTAGAGAATGAGTTGA 1137
Db    842 CCACCGCCATCTTCTTCCTGCCTGATGAGGGGAAACTACAGCACCTGGAAAATGAACTCA 901

Qy   1138 CTCATGACATTATTACTAAATTTTTAGAGAACGAGGATCGTCGTAGCGCTTCTCTGCACC 1197
Db    902 CCCACGATATCATCACCAAGTTCCTGGAAAATGAAGACAGAAGGTCTGCCAGCTTACATT 961

Qy   1198 TGCCAAAGTTAAGTATCACCGGTACTTACGACTTAAAATCTGTTTTAGGCCAGTTAGGTA 1257
Db    962 TACCCAAACTGTCCATTACTGGAACCTATGATCTGAAGAGCGTCCTAGGTCAACTGGGCA 1021

Qy   1258 TTACCAAAGTTTTTTCTAACGGTGCCGATTTGAGTGGTGTTACTGAAGAAGCTCCATTAA 1317
Db   1022 TCACTAAGGTCTTCAGCAATGGGGCTGACCTCTCCGGGGTCACAGAGGAGGCACCCCTGA 1081

Qy   1318 AATTGAGTAAAGCTGTTCACAAAGCCGTCTTAACTATTGATGAAAAGGGTACCGAGGCCG 1377
Db   1082 AGCTCTCCAAGGCCGTGCATAAGGCTGTGCTGACCATCGACGAGAAAGGGACTGAAGCTG 1141

Qy   1378 CCGGCGCTATGTTCCTGGAAGCTATTCCAATGAGCATTCCACCAGAAGTTAAATTTAATA 1437
Db   1142 CTGGGGCCATGTTTTTAGAGGCCATACCCATGTCTATCCGCCCCGAGGTCAAGTTCAACA 1201

Qy   1438 AACCATTCGTTTTTCTGATGATCGAGCAGAACACTAAAAGCCCATTGTTTATGGGTAAGG 1497
Db   1202 AACCCTTTGTCTTCTTAATGATTGAACAAAATACCAAGTCTCCCCTCTTCATGGGAAAAG 1261

Qy   1498 TTGTCAACCCAACTCAGAAGTA 1519
```

```
Db   1262 TGGTGAATCCCACCCAAAAATA 1283


RESULT 12
AAS45052
ID   AAS45052 standard; cDNA; 1367 BP.
XX
AC   AAS45052;
XX
DT   18-DEC-2001  (first entry)
XX
DE   cDNA encoding novel human secretory protein, Seq ID No 133.
XX
KW   Human; secreted protein; arthritis; Crohn's disease; sepsis; shock;
KW   ischaemia-reperfusion injury; haematopoiesis; cancer; neuropathy;
KW   transgenic animal; Alzheimer's disease; Parkinson's disease; burn;
KW   amyotrophic lateral sclerosis; platelet disorder; thrombocytopenia;
KW   ulcer; osteoporosis; bone degenerative disorder; periodontal disease;
KW   gut protection; lung; liver fibrosis; immune deficiency; infection;
KW   severe combined immunodeficiency; SCID; autoimmune disorder; allergy;
KW   multiple sclerosis; rheumatoid arthritis; diabetes mellitus; asthma;
KW   fertility; analgesic; pain; antigen; ss.
XX
OS   Homo sapiens.
XX
PN   WO200166689-A2.
XX
PD   13-SEP-2001.
XX
PF   05-MAR-2001; 2001WO-US04942.
XX
PR   07-MAR-2000; 2000US-0519705.
PR   19-MAY-2000; 2000US-0574454.
PR   17-JUN-2000; 2000US-0596193.
PR   14-JUL-2000; 2000US-0616847.
PR   19-SEP-2000; 2000US-0665363.
PR   20-OCT-2000; 2000US-0693267.
XX
PA   (HYSE-) HYSEQ INC.
XX
PI   Tang YT,  Liu C,  Asundi V,  Xu C,  Wehrman T,  Ren F,  Ma Y,  Zhou P;
PI   Zhao QA,  Yang Y,  Drmanac RT,  Zhang J,  Chen R,  Xue AJ,  Wang J;
XX
DR   WPI; 2001-589934/66.
DR   P-PSDB; AAU28152.
XX
PT   Novel polypeptides and nucleic acids obtained from cDNA libraries
PT   prepared from various human tissues, for diagnosis and treatment of
PT   cancer, neurological, inflammatory, and autoimmune disorders -
XX
PS   Claim 1; SEQ ID No 133; 107pp; English.
XX
CC   The invention relates to novel isolated human secreted polypeptides (I)
CC   and polynucleotides (II). (I) and (II) are useful for treating
CC   inflammatory conditions such as arthritis, nephritis, Crohn's disease,
CC   ischaemia-reperfusion injury, shock, sepsis, immune responses, and is
CC   involved in increasing haematopoiesis, stem cell survival, bone growth
CC   and remodeling. (I), (II) and modulators of (II) are useful for
CC   prophylaxis or treatment of one or more cancers. (II) is also useful for
CC   creating transgenic animals useful for studying the in vivo activities of
CC   the polypeptide as well as for studying modulators of the polypeptides.
CC   (I) induces the proliferation of neural cells and regeneration of nerve
CC   and brain tissue and is useful for the treatment of central and
CC   peripheral nervous system diseases and neuropathies, such as Alzheimer's,
CC   Parkinson's disease, Huntington's disease, and amyotrophic lateral
CC   sclerosis. In addition, (I) is involved in chemotactic or chemokinetic
CC   activity, regulation of haematopoiesis and is useful for treating myeloid
CC   or lymphoid cell disorders, platelet disorders such as thrombocytopenia
CC   and for regeneration of bone, cartilage, tendon, ligament and/or nerve
CC   tissue growth, and in tissue repair, healing of burns, incisions,
CC   ulcers, for treating osteoporosis, osteoarthritis, bone degenerative
CC   disorders, or periodontal disease. Furthermore, (I) is also useful for
CC   gut protection or regeneration and treatment of lung or liver fibrosis,
CC   reperfusion injury in various tissues, various immune deficiencies and
CC   disorders including severe combined immunodeficiency (SCID), bacterial or
CC   fungal infections, autoimmune disorders e.g. multiple sclerosis,
CC   rheumatoid arthritis, diabetes mellitus, myasthenia gravis, allergic
CC   reactions and conditions, such as asthma or other respiratory problems.
CC   In addition, (I) affects biorhythms or circadian cycles of rhythms,
CC   fertility, metabolism, catabolism, anabolism, storage or elimination of
CC   dietary fat, lipid, protein, carbohydrate, vitamins, minerals, provides
CC   analgesic effects or other pain reducing effects, immunoglobulin like
CC   activity and can act as an antigen in a vaccine composition to raise an
CC   immune response. AAS44920-AAS45295 represent novel human secreted protein
CC   coding sequences of the invention.
XX
SQ   Sequence 1367 BP; 357 A; 392 C; 323 G; 295 T; 0 other;

  Query Match             28.4%;  Score 433.4;  DB 22;  Length 1367;
  Best Local Similarity   60.2%;  Pred. No. 6.1e-99;
  Matches  736;  Conservative    0;  Mismatches  486;  Indels    1;  Gaps    1;

Qy    298 TGTGTGGTAAGTCCTGTGTTTCCCCAGTCAAGGCCATGGAAGACCCTCAAGGCGACGCCG 357
Db     67 TGGCAGGCCTGTGCTGCCTGGTCCCTGTCTCCCTGGCTGAGGATCCCCAGGGAGATGCTG 126

Qy    358 CTCAAAAAACCGACACCAGTCATCACGACCAAGACCATCCGACTTTTAATAAAATTACTC 417
Db    127 CCCAGAAGACAGATACATCCCACCATGATCAGGATCACCCAACCTTCAACAAGATCACCC 186

Qy    418 CAAATTTAGCCGAATTTGCTTTTTCTTTGTATAGACAATTAGCTCATCAAAGTAATTCTA 477
Db    187 CCAACCTGGCTGAGTTCGCCTTCAGCCTATACCGCCAGCTGGCACACCAGTCCAACAGCA 246

Qy    478 CTAACATTTTTTTTAGTCCTGTTTCTATTGCCACTGCTTTCGCCATGTTGAGTTTAGGTA 537
Db    247 CCAATATCTTCTTCTCCCCAGTGAGCATCGCTACAGCCTTTGCAATGCTCTCCCTGGGGA 306

Qy    538 CTAAAGCCGATACCCATGACGAGATTTTAGAAGGTTTAAACTTTAATTTGACCGAAATCC 597
Db    307 CCAAGGCTGACACTCACGATGAAATCCTGGAGGGCCTGAATTTCAACCTCACGGAGATTC 366

Qy    598 CAGAAGCCCAAATTCACGAGGGTTTTCAAGAGTTGTTGAGAACTTTGAATCAACCTGATT 657
Db    367 CGGAGGCTCAGATCCATGAAGGCTTCCAGGAACTCCTCCGTACCCTCAACCAGCCAGACA 426

Qy    658 CTCAATTGCAATTAACTACTGGTAACGGTTTATTTTTGTCTGAAGGTTTAAAATTGGTTG 717
Db    427 GCCAGCTCCAGCTGACCACCGGCAATGGCCTGTTCCTCAGCGAGGGCCTGAAGCTAGTGG 486

Qy    718 ACAAATTCCTAGAAGACGTCAAGAAACTATATCATAGTGAGGCTTTTACCGTTAATTTTG 777
Db    487 ATAAGTTTTTGGAGGATGTTAAAAAGTTGTACCACTCAGAAGCCTTCACTGTCAACTTCG 546

Qy    778 GTGAT-ACTGAGGAAGCTAAAAAGCAAATTAATGATTATGTTGAGAAAGGCACCCAGGGT 836
Db    547 GGGATCACCGAAGAGGCCAAGAAACAGATCAACGATTACGTGGAGAAGGGTACTCAAGGG 606

Qy    837 AAGATCGTTGACCTAGTTAAAGAATTAGATCGTGATACCGTCTTCGCACTAGTTAACTAT 896
Db    607 AAAATTGTGGATTTGGTCAAGGAGCTTGACAGAGACACAGTTTTTGCTCTGGTGAATTAC 666

Qy    897 ATTTTTTTCAAGGGTAAGTGGGAACGTCCTTTCGAGGTTAAAGATACTGAAGAGGAAGAT 956
Db    667 ATCTTCTTTAAAGGCAAATGGGAGAGACCTTTTGAAGTCAAGGACACCGAGGACGAGGAC 726

Qy    957 TTTCATGTTGATCAAGTTACTACTGTCAAAGTTCCAATGATGAAAAGACTGGGTATGTTC 1016
Db    727 TTCCACGTGGACCAGGTGACCACCGTGAAGGTCCCTATGATGAAGCGTTTAGGCATGTTT 786

Qy   1017 AATATTCAACATTGCAAAAAATTAAGTTCTTGGGTCTTATTAATGAAGTATTTAGGTAAC 1076
Db    787 AACATCCAGCACTGTAAGAAGCTGTCCAGCTGGGTACTGCTAATGAAATACCTGGGCAAT 846

Qy   1077 GCTACTGCTATTTTTTTTTTACCAGACGAAGGTAAGCTTCAACATTTAGAGAATGAGTTG 1136
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Db    847 GCCACCGCCATCTTCTTCCTACCTGATGAGGGGAAACTACAGCACCTGGAAAATGAACTC 906

Qy   1137 ACTCATGACATTATTACTAAATTTTTAGAGAACGAGGATCGTCGTAGCGCTTCTCTGCAC 1196
          || || || || || || || || ||  | || || || ||  |  |    ||     | ||
Db    907 ACCCACGATATCATCACCAAGTTCCTGGAAAATGAAGACAGAAGGTCTGCCAGCTTACAT 966

Qy   1197 CTGCCAAAGTTAAGTATCACCGGTACTTACGACTTAAAATCTGTTTTAGGCCAGTTAGGT 1256
            | || ||  |    || || || || || ||  | ||    ||  | || ||  | ||
Db    967 TTACCCAAACTGTCCATTACTGGAACCTATGATCTGAAGAGCGTCCTGGGTCAACTGGGC 1026

Qy   1257 ATTACCAAAGTTTTTTCTAACGGTGCCGATTTGAGTGGTGTTACTGAAGAAGCTCCATTA 1316
          || || || || ||    || || || ||  |    || || || || || || ||  |
Db   1027 ATCACTAAGGTCTTCAGCAATGGGGCTGACCTCTCCGGGGTCACAGAGGAGGCACCCCTG 1086

Qy   1317 AAATTGAGTAAAGCTGTTCACAAAGCCGTCTTAACTATTGATGAAAAGGGTACCGAGGCC 1376
          ||  |    || || || || || || ||  | || || || || || ||||| || || ||
Db   1087 AAGCTCTCCAAGGCCGTGCATAAGGCTGTGCTGACCATCGACGAGAAGGGGACTGAAGCT 1146

Qy   1377 GCCGGCGCTATGTTCCTGGAAGCTATTCCAATGAGCATTCCACCAGAAGTTAAATTTAAT 1436
          || || || |||||  | || || || |||||||   || || ||||| || || || ||
Db   1147 GCTGGGGCCATGTTTTTAGAGGCCATACCAATGTCTATCCCCCCAGAGGTCAAGTTCAAC 1206

Qy   1437 AAACCATTCGTTTTTCTGATGATCGAGCAGAACACTAAAAGCCCATTGTTTATGGGTAAG 1496
          ||||| || || ||  | ||||| || || || || ||    ||  | || |||||| ||
Db   1207 AAACCCTTTGTCTTCTTAATGATTGAACAAAATACCAAGTCTCCCCTCTTCATGGGAAAA 1266

Qy   1497 GTTGTCAACCCAACTCAGAAGTA 1519
          || || || || || || || ||
Db   1267 GTGGTGAATCCCACCCAAAAATA 1289


RESULT 13
AAQ31403
ID   AAQ31403 standard; DNA; 1352 BP.
XX
AC   AAQ31403;
XX
DT   23-MAR-1993  (first entry)
XX
DE   Human alpha-1 antitrypsin.
XX
KW   Plasmid; pCMV4; liposome; antiprotease; lung; emphysema;
KW   adult respiratory distress syndrome; ARDS; ss.
XX
OS   Homo sapiens.
XX
PN   WO9219730-A.
XX
PD   12-NOV-1992.
XX
PF   27-MAR-1992;   92WO-US02465.
XX
PR   24-APR-1991;   91US-0690283.
XX
PA   (UYVA-) UNIV VANDERBILT.
XX
PI   Brigham K, Canonico A, Conary J, Meyrick B;
XX
DR   WPI; 1992-398857/48.
XX
PT   Human alpha-1 anti-trypsin contg. plasmid - for treatment of
PT   anti-protease deficiency in emphysema and other lung diseases
XX
PS   Disclosure; Fig 6a-6b; 32pp; English.
XX
CC   A plasmid consisting of a pCMV4 expression vector including a coding
CC   sequence of human alpha-1 antitrypsin may be incorporated into
CC   liposomes capable of targeting specific tissue.  The plasmid is then
CC   capable of expression of the gene extrachromosomally in the cells of
CC   the target tissue and is unincorporable into the chromosome of the
CC   cells of the target tissue.  Thus, the liposome including the
CC   plasmid can be used in a method for treating a deficiency of the
CC   gene product in cells of the target tissue.
CC   The specific use of the human alpha-1 antitrypsin is significant as
CC   this antiprotease is important in protecting the lungs against
CC   emphysema.  The adult respiratory distress syndrome (ARDS) is thought
CC   to involve a relative deficiency of antiprotease activity.
CC   Therefore, the delivery of a functioning alpha-1 antiprotease
CC   gene to the lungs can be therapeutic in many human conditions
CC   characterised by injury of the lungs.
XX
SQ   Sequence 1352 BP; 349 A; 386 C; 325 G; 292 T; 0 other;

  Query Match             28.4%;  Score 433.2;  DB 13;  Length 1352;
  Best Local Similarity   59.7%;  Pred. No. 6.8e-99;
  Matches  729;  Conservative    0;  Mismatches  493;  Indels    0;  Gaps    0;

Qy    298 TGTGTGGTAAGTCCTGTGTTTCCCCAGTCAAGGCCATGGAAGACCCTCAAGGCGACGCCG 357
          ||   ||   || |||  |   ||| |||          || || || || || || || |
Db     54 TGGCAGGCCTGTGCTGCCTGGTCCCTGTCTCCCTGGCTGAGGATCCCCAGGGAGATGCTG 113

Qy    358 CTCAAAAAACCGACACCAGTCATCACGACCAAGACCATCCGACTTTTAATAAAATTACTC 417
          | || || || || ||     || || || || || || || || || || || || || | |
Db    114 CCCAGAAGACAGATACATCCCACCATGATCAGGATCACCCAACCTTCAACAAGATCACCC 173

Qy    418 CAAATTTAGCCGAATTTGCTTTTTCTTTGTATAGACAATTAGCTCATCAAAGTAATTCTA 477
          | ||  | || || || || ||      | ||  | ||  | || || ||·   ||    |
Db    174 CCAACCTGGCTGAGTTCGCCTTCAGCCTATACCGCCAGCTGGCACACCAGTCCAACAGCA 233

Qy    478 CTAACATTTTTTTTAGTCCTGTTTCTATTGCCACTGCTTTCGCCATGTTGAGTTTAGGTA 537
          | || || || ||     || ||    || || || || || || ||| |      | || |
Db    234 CCAATATCTTCTTCTCCCCAGTGAGCATCGCTACAGCCTTTGCAATGCTCTCCCTGGGGA 293

Qy    538 CTAAAGCCGATACCCATGACGAGATTTTAGAAGGTTTAAACTTTAATTTGACCGAAATCC 597
          | || || || || || || || || ||  | || ||  | || || ||  | || || || | |
Db    294 CCAAGGCTGACACTCACGATGAAATCCTGGAGGGCCTGAATTTCAACCTCACGGAGATTC 353

Qy    598 CAGAAGCCCAAATTCACGAGGGTTTTCAAGAGTTGTTGAGAACTTTGAATCAACCTGATT 657
          | || || || || || || || || || || ||  |  |  | ||  | || || || ||
Db    354 CGGAGGCTCAGATCCATGAAGGCTTCCAGGAACTCCTCCGTACCCTCAACCAGCCAGACA 413

Qy    658 CTCAATTGCAATTAACTACTGGTAACGGTTTATTTTTGTCTGAAGGTTTAAAATTGGTTG 717
            ||  | ||  | || || || || ||  | ||  |   || ||  | ||  | || |
Db    414 GCCAGCTCCAGCTGACCACCGGCAATGGCCTGTTCCTCAGCGAGGGCCTGAAGCTAGTGG 473

Qy    718 ACAAATTCCTAGAAGACGTCAAGAAACTATATCATAGTGAGGCTTTTACCGTTAATTTTG 777
          | || ||  | || || || || ||  | || ||     || || || || || || || |
Db    474 ATAAGTTTTTGGAGGATGTTAAAAAGTTGTACCACTCAGAAGCCTTCACTGTCAACTTCG 533

Qy    778 GTGATACTGAGGAAGCTAAAAAGCAAATTAATGATTATGTTGAGAAAGGCACCCAGGGTA 837
          | || || || || || || || || || || || ||||| || ||||| || || || || |
Db    534 GGGACACCGAAGAGGCCAAGAAACAGATCAACGATTACGTGGAGAAGGGTACTCAAGGGA 593

Qy    838 AGATCGTTGACCTAGTTAAAGAATTAGATCGTGATACCGTCTTCGCACTAGTTAACTATA 897
          | || || ||  | || || || ||  | ||  | || || || || || || || || | |
Db    594 AAATTGTGGATTTGGTCAAGGAGCTTGACAGAGACACAGTTTTTGCTCTGGTGAATTACA 653

Qy    898 TTTTTTTCAAGGGTAAGTGGGAACGTCCTTTCGAGGTTAAAGATACTGAAGAGGAAGATT 957
          | || || || || || ||||||  | || || || || || || || || || || || | |
Db    654 TCTTCTTTAAAGGCAAATGGGAGAGACCCTTTGAAGTCAAGGACACCGAGGAAGAGGACT 713

Qy    958 TTCATGTTGATCAAGTTACTACTGTCAAAGTTCCAATGATGAAAAGACTGGGTATGTTCA 1017
          | || || || || || || || || || || || || ||||||||  |  | || |||| |
Db    714 TCCACGTGGACCAGGTGACCACCGTGAAGGTGCCTATGATGAAGCGTTTAGGCATGTTTA 773

Qy   1018 ATATTCAACATTGCAAAAAATTAAGTTCTTGGGTCTTATTAATGAAGTATTTAGGTAACG 1077
          | || || || || || ||  |       ||||  |  | |||| ||  | || || | |
Db    774 ACATCCAGCACTGTAAGAAGCTGTCCAGCTGGGTGCTGCTGATGAAATACCTGGGCAATG 833

Qy   1078 CTACTGCTATTTTTTTTTTACCAGACGAAGGTAAGCTTCAACATTTAGAGAATGAGTTGA 1137
          | || || || || ||  | || || || || || || || ||  | || |||||  | |
Db    834 CCACCGCCATCTTCTTCCTGCCTGATGAGGGGAAACTACAGCACCTGGAAAATGAACTCA 893

Qy   1138 CTCATGACATTATTACTAAATTTTTAGAGAACGAGGATCGTCGTAGCGCTTCTCTGCACC 1197
          | || || || || || || || ||  | || || || ||  |  |    ||     | ||
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```
Db    894 CCCACGATATCATCACCAAGTTCCTGGAAAATGAAGACAGAAGGTCTGCCAGCTTACATT 953

Qy   1198 TGCCAAAGTTAAGTATCACCGGTACTTACGACTTAAAATCTGTTTTAGGCCAGTTAGGTA 1257

Db    954 TACCCAAACTGTCCATTACTGGAACCTATGATCTGAAGAGCGTCCTGGGTCAACTGGGCA 1013

Qy   1258 TTACCAAAGTTTTTTCTAACGGTGCCGATTTGAGTGGTGTTACTGAAGAAGCTCCATTAA 1317

Db   1014 TCACTAAGGTCTTCAGCAATGGGGCTGACCTCTCCGGGGTCACAGAGGAGGCACCCCTGA 1073

Qy   1318 AATTGAGTAAAGCTGTTCACAAAGCCGTCTTAACTATTGATGAAAAGGGTACCGAGGCCG 1377

Db   1074 AGCTCTCCAAGGCCGTGCATAAGGCTGTGCTGACCATCGACGAGAAAGGGACTGAAGCTG 1133

Qy   1378 CCGGCGCTATGTTCCTGGAAGCTATTCCAATGAGCATTCCACCAGAAGTTAAATTTAATA 1437

Db   1134 CTGGGGCCATGTTTTTAGAGGCCATACCCATGTCTATCCCCCCCGAGGTCAAGTTCAACA 1193

Qy   1438 AACCATTCGTTTTTCTGATGATCGAGCAGAACACTAAAAGCCCATTGTTTATGGGTAAGG 1497

Db   1194 AACCCTTTGTCTTCTTAATGATTGAACAAAATACCAAGTCTCCCCTCTTCATGGGAAAAG 1253

Qy   1498 TTGTCAACCCAACTCAGAAGTA 1519

Db   1254 TGGTGAATCCCACCCAAAAATA 1275


RESULT 14
ABL67511
ID   ABL67511 standard; DNA; 1352 BP.
XX
AC   ABL67511;
XX
DT   15-MAY-2002  (first entry)
XX
DE   Thyroid cancer related gene sequence SEQ ID NO:5848.
XX
KW   Human; cancer; colon; breast; ovary; oesophagus; kidney; thyroid;
KW   stomach; lung; prostate; pancreas; carcinoma; antitumour; cancerous;
KW   cytostatic; gene therapy; antineoplastic; Wilm's tumour; adenocarcinoma;
KW   gene; ds.
XX
OS   Homo sapiens.
XX
PN   WO200194629-A2.
XX
PD   13-DEC-2001.
XX
PF   30-MAY-2001; 2001WO-US10838.
XX
PR   05-JUN-2000; 2000US-209473P.
PR   05-JUN-2000; 2000US-209531P.
PR   18-SEP-2000; 2000US-233133P.
PR   18-SEP-2000; 2000US-233617P.
PR   20-SEP-2000; 2000US-234009P.
PR   20-SEP-2000; 2000US-234034P.
PR   20-SEP-2000; 2000US-234052P.
PR   22-SEP-2000; 2000US-234509P.
PR   22-SEP-2000; 2000US-234567P.
PR   25-SEP-2000; 2000US-234923P.
PR   25-SEP-2000; 2000US-234924P.
PR   25-SEP-2000; 2000US-235077P.
PR   25-SEP-2000; 2000US-235082P.
PR   25-SEP-2000; 2000US-235134P.
PR   25-SEP-2000; 2000US-235280P.
PR   26-SEP-2000; 2000US-235637P.
PR   26-SEP-2000; 2000US-235638P.
PR   27-SEP-2000; 2000US-235711P.
PR   27-SEP-2000; 2000US-235720P.
PR   27-SEP-2000; 2000US-235840P.
PR   27-SEP-2000; 2000US-235863P.
PR   28-SEP-2000; 2000US-236028P.
PR   28-SEP-2000; 2000US-236032P.
PR   28-SEP-2000; 2000US-236033P.
PR   28-SEP-2000; 2000US-236034P.
PR   28-SEP-2000; 2000US-236109P.
PR   28-SEP-2000; 2000US-236111P.
PR   29-SEP-2000; 2000US-236842P.
PR   29-SEP-2000; 2000US-236891P.
PR   02-OCT-2000; 2000US-237172P.
PR   02-OCT-2000; 2000US-237173P.
PR   02-OCT-2000; 2000US-237278P.
PR   02-OCT-2000; 2000US-237294P.
PR   02-OCT-2000; 2000US-237295P.
PR   02-OCT-2000; 2000US-237316P.
PR   03-OCT-2000; 2000US-237425P.
PR   03-OCT-2000; 2000US-237598P.
PR   03-OCT-2000; 2000US-237604P.
PR   03-OCT-2000; 2000US-237606P.
PR   03-OCT-2000; 2000US-237608P.
PR   01-NOV-2000; 2000US-244867P.
PR   01-NOV-2000; 2000US-245084P.
XX
PA   (AVAL-) AVALON PHARM.
XX
PI   Young PE,  Augustus M,  Carter KC,  Ebner R,  Endress G,  Horrigan S;
PI   Soppet DR,  Weaver Z;
XX
DR   WPI; 2002-188264/24.
XX
PT   Screening for anti-neoplastic agent involves exposing cells to a
PT   chemical agent to be tested for anti-neoplastic activity, and
PT   determining a change in expression of a gene of a signature gene set -
XX
PS   Claim 1; SEQ ID 5848; 44pp; English.
XX
CC   The present invention describes a method (M1) for screening for an
CC   anti-neoplastic agent. The method involves exposing cells to a chemical
CC   agent to be tested for anti-neoplastic activity, determining a change in
CC   expression of at least one gene (I) of a signature gene set, where (I)
CC   comprises a sequence (S) selected from 8447 sequences (given in ABL61664
CC   to ABL70110), or is at least 95% identical to (S), where a change in
CC   expression is indicative of anti-neoplastic activity. (I) has cytostatic
CC   activity and can be used in gene therapy. M1 can be used for screening
CC   an anti-neoplastic agent, and can be used for producing a product which
CC   is the data collected with respect to the anti-neoplastic agent as a
CC   result of M1, and the data is sufficient to convey the chemical
CC   structure and/or properties of the agent. M1 can be used in the
CC   treatment of cancer such as colon, breast, stomach, lung, thyroid,
CC   oesophageal, ovarian, kidney, prostate or pancreatic cancer,
CC   adenocarcinoma, carcinoma, clear cell cancer, infiltrating ductal cancer,
CC   infiltrating lobular cancer, squamous cell carcinoma, neuroendocrine
CC   carcinoma, papillary carcinoma and Wilm's tumour.
XX
SQ   Sequence 1352 BP; 349 A; 386 C; 325 G; 292 T; 0 other;

  Query Match             28.4%;  Score 433.2;  DB 24;  Length 1352;
  Best Local Similarity   59.7%;  Pred. No. 6.8e-99;
  Matches  729;  Conservative    0;  Mismatches  493;  Indels    0;  Gaps    0;

Qy    298 TGTGTGGTAAGTCCTGTGTTTCCCCAGTCAAGGCCATGGAAGACCCTCAAGGCGACGCCG 357

Db     54 TGGCAGGCCTGTGCTGCCTGGTCCCTGTCTCCCTGGCTGAGGATCCCCAGGGAGATGCTG 113

Qy    358 CTCAAAAAACCGACACCAGTCATCACGACCAAGACCATCCGACTTTTAATAAAATTACTC 417

Db    114 CCCAGAAGACAGATACATCCCACCATGATCAGGATCACCCAACCTTCAACAAGATCACCC 173

Qy    418 CAAATTTAGCCGAATTTGCTTTTTCTTTGTATAGACAATTAGCTCATCAAAGTAATTCTA 477

Db    174 CCAACCTGGCTGAGTTCGCCTTCAGCCTATACCGCCAGCTGGCACACCAGTCCAACAGCA 233

Qy    478 CTAACATTTTTTTTAGTCCTGTTTCTATTGCCACTGCTTTCGCCATGTTGAGTTTAGGTA 537

Db    234 CCAATATCTTCTTCTCCCCAGTGAGCATCGCTACAGCCTTTGCAATGCTCTCCCTGGGGA 293
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Qy     538 CTAAAGCCGATACCCATGACGAGATTTTAGAAGGTTTAAACTTTAATTTGACCGAAATCC 597
           | || || || || || || || ||  | || ||  | || || ||  | || || || |
Db     294 CCAAGGCTGACACTCACGATGAAATCCTGGAGGGCCTGAATTTCAACCTCACGGAGATTC 353

Qy     598 CAGAAGCCCAAATTCACGAGGGTTTTCAAGAGTTGTTGAGAACTTTGAATCAACCTGATT 657
           | || || || || || || || || || ||  |  |  | ||  | || || || ||
Db     354 CGGAGGCTCAGATCCATGAAGGCTTCCAGGAACTCCTCCGTACCCTCAACCAGCCAGACA 413

Qy     658 CTCAATTGCAATTAACTACTGGTAACGGTTTATTTTTGTCTGAAGGTTTAAAATTGGTTG 717
             ||  | ||  | || || || || ||  | ||  |    || ||  | ||  | || |
Db     414 GCCAGCTCCAGCTGACCACCGGCAATGGCCTGTTCCTCAGCGAGGGCCTGAAGCTAGTGG 473

Qy     718 ACAAATTCCTAGAAGACGTCAAGAAACTATATCATAGTGAGGCTTTTACCGTTAATTTTG 777
           | || ||  | || || || || ||  | || ||    || || || || || || || |
Db     474 ATAAGTTTTTGGAGGATGTTAAAAAGTTGTACCACTCAGAAGCCTTCACTGTCAACTTCG 533

Qy     778 GTGATACTGAGGAAGCTAAAAAGCAAATTAATGATTATGTTGAGAAAGGCACCCAGGGTA 837
           | || || || || || || || || || || ||||| || ||||| || || || || |
Db     534 GGGACACCGAAGAGGCCAAGAAACAGATCAACGATTACGTGGAGAAGGGTACTCAAGGGA 593

Qy     838 AGATCGTTGACCTAGTTAAAGAATTAGATCGTGATACCGTCTTCGCACTAGTTAACTATA 897
           | || || ||  | || || ||  | ||  | || || || || || || || || || |
Db     594 AAATTGTGGATTTGGTCAAGGAGCTTGACAGAGACACAGTTTTTGCTCTGGTGAATTACA 653

Qy     898 TTTTTTTCAAGGGTAAGTGGGAACGTCCTTTCGAGGTTAAAGATACTGAAGAGGAAGATT 957
           | || || || || || ||||  | || || || || || || || || || || || || |
Db     654 TCTTCTTTAAAGGCAAATGGGAGAGACCCTTTGAAGTCAAGGACACCGAGGAAGAGGACT 713

Qy     958 TTCATGTTGATCAAGTTACTACTGTCAAAGTTCCAATGATGAAAAGACTGGGTATGTTCA 1017
           | || || || || || || || || || || || || ||||||||  |  | || ||||| |
Db     714 TCCACGTGGACCAGGTGACCACCGTGAAGGTGCCTATGATGAAGCGTTTAGGCATGTTTA 773

Qy    1018 ATATTCAACATTGCAAAAAATTAAGTTCTTGGGTCTTATTAATGAAGTATTTAGGTAACG 1077
           | || || || || || ||  |      |||||  |  | ||||| ||  | || || |
Db     774 ACATCCAGCACTGTAAGAAGCTGTCCAGCTGGGTGCTGCTGATGAAATACCTGGGCAATG 833

Qy    1078 CTACTGCTATTTTTTTTTTACCAGACGAAGGTAAGCTTCAACATTTAGAGAATGAGTTGA 1137
           | || || || || ||  | || || || || || || || ||  | || ||||| | |
Db     834 CCACCGCCATCTTCTTCCTGCCTGATGAGGGGAAACTACAGCACCTGGAAAATGAACTCA 893

Qy    1138 CTCATGACATTATTACTAAATTTTTAGAGAACGAGGATCGTCGTAGCGCTTCTCTGCACC 1197
           | || || || || || || || ||  | || || || ||  |  |    ||     | ||
Db     894 CCCACGATATCATCACCAAGTTCCTGGAAAATGAAGACAGAAGGTCTGCCAGCTTACATT 953

Qy    1198 TGCCAAAGTTAAGTATCACCGGTACTTACGACTTAAAATCTGTTTTAGGCCAGTTAGGTA 1257
           | || ||  |    || || || || || ||  | ||    ||  | || ||  | || |
Db     954 TACCCAAACTGTCCATTACTGGAACCTATGATCTGAAGAGCGTCCTGGGTCAACTGGGCA 1013

Qy    1258 TTACCAAAGTTTTTTCTAACGGTGCCGATTTGAGTGGTGTTACTGAAGAAGCTCCATTAA 1317
           | || || || ||    || || || ||  |   || || || || || || ||  | |
Db    1014 TCACTAAGGTCTTCAGCAATGGGGCTGACCTCTCCGGGGTCACAGAGGAGGCACCCCTGA 1073

Qy    1318 AATTGAGTAAAGCTGTTCACAAAGCCGTCTTAACTATTGATGAAAAGGGTACCGAGGCCG 1377
           |  |    || || || || || || ||  | || || || || || || || || || |
Db    1074 AGCTCTCCAAGGCCGTGCATAAGGCTGTGCTGACCATCGACGAGAAAGGGACTGAAGCTG 1133

Qy    1378 CCGGCGCTATGTTCCTGGAAGCTATTCCAATGAGCATTCCACCAGAAGTTAAATTTAATA 1437
           | || || |||||  | || || || || |||   || || || || || || || || |
Db    1134 CTGGGGCCATGTTTTTAGAGGCCATACCCATGTCTATCCCCCCCGAGGTCAAGTTCAACA 1193

Qy    1438 AACCATTCGTTTTTCTGATGATCGAGCAGAACACTAAAAGCCCATTGTTTATGGGTAAGG 1497
           |||| || || ||  | ||||| || || || || ||   ||  | || ||||| || |
Db    1194 AACCCTTTGTCTTCTTAATGATTGAACAAAATACCAAGTCTCCCCTCTTCATGGGAAAAG 1253

Qy    1498 TTGTCAACCCAACTCAGAAGTA 1519
           | || || || || || || ||
Db    1254 TGGTGAATCCCACCCAAAAATA 1275


RESULT 15
ABK84495
ID   ABK84495 standard; cDNA; 1371 BP.
XX
AC   ABK84495;
XX
DT   14-AUG-2002  (first entry)
XX
DE   Human cDNA differentially expressed in granulocytic cells #1066.
XX
KW   Human; ss; granulocytic cell; DNA chip; bacterial infection;
KW   viral infection; parasitic infection; protozoal infection;
KW   fungal infection; sterile inflammatory disease; psoriasis;
KW   rheumatoid arthritis; glomerulonephritis; asthma; thrombosis;
KW   cardiac reperfusion injury; renal reperfusion injury; ARDS;
KW   adult respiratory distress syndrome; inflammatory bowel disease;
KW   Crohn's disease; ulcerative colitis; periodontal disease;
KW   granulocyte activation; chronic inflammation; allergy.
XX
OS   Homo sapiens.
XX
PN   WO200228999-A2.
XX
PD   11-APR-2002.
XX
PF   03-OCT-2001; 2001WO-US30821.
XX
PR   03-OCT-2000; 2000US-237189P.
XX
PA   (GENE-) GENE LOGIC INC.
XX
PI   Beazer-Barclay Y,  Weissman SM,  Yamaga S,  Vockley J;
XX
DR   WPI; 2002-435328/46.
XX
PT   Detecting granulocyte activation by detecting differential expression
PT   of genes associated with granulocyte activation, which serves as
PT   diagnostic markers that is useful for monitoring disease states and
PT   drug toxicity  -
XX
PS   Claim 1; SEQ ID No 1066; 114pp; English.
XX
CC   The invention relates to detecting (M1) granulocyte (GC) activation
CC   (GCA), by detecting the level of expression of gene(s) (Gs) identified by
CC   DNA chip analysis as given in the specification, and comparing
CC   the expression level to an expression level in an unactivated
CC   GC, where differential expression of Gs is indicative of GCA.
CC   Also included are modulating (M2) GA by contacting GC with an agent
CC   that alters the expression of at least one gene in Gs; (2) screening (M3)
CC   for an agent capable of modulating GCA or an inflammation (especially
CC   chronic) in a tissue, an allergic response in a subject, exposure of a
CC   subject to a pathogen or sterile inflammatory disease using the
CC   gene expression profile; (3) detecting (M4) an inflammation (especially
CC   chronic) in a tissue, an allergic response in a subject, exposure of a
CC   subject to a pathogen or sterile inflammatory disease, by detecting the
CC   level of expression in a sample of the tissue of gene(s) from Gs, where
CC   the level of expression of the gene is indicative of inflammation;
CC   (4) treating (M5) an inflammation (especially chronic) or in a tissue,
CC   an allergic response in a subject, exposure of a subject to a pathogen
CC   or sterile inflammatory disease, by contacting a tissue having
CC   inflammation with an agent that modulates the expression of gene(s)
CC   from Gs in the tissue. M1 is useful for detecting GCA; M2 is useful for
CC   modulating GA; M3 is useful for screening an agent capable of modulating
CC   GCA preferably in an inflammation in a tissue; M4 is useful for
CC   detecting an inflammation (especially chronic) in a tissue, an allergic
CC   response in a subject, exposure of a subject to a pathogen or sterile
CC   inflammatory disease (e.g. psoriasis, rheumatoid arthritis,
CC   glomerulonephritis, asthma, thrombosis, cardiac reperfusion injury, renal
CC   reperfusion injury, ARDS, adult respiratory distress syndrome,
CC   inflammatory bowel disease, Crohn's disease, ulcerative colitis,
CC   periodontal disease; also bacterial infection, viral infection,
CC   parasitic infection, protozoal infection, fungal infection and M5 is
CC   useful for treating one of the above conditions. The present
CC   sequence represents a gene differentially expressed in granulocytes.
CC   Note: The sequence data for this patent did not form part
CC   of the printed specification, but was obtained in electronic
CC   format directly from WIPO at
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CC ftp.wipo.int/pub/published_pct_sequences.
XX
SQ Sequence 1371 BP; 350 A; 388 C; 340 G; 293 T; 0 other;

Query Match 28.4%; Score 433.2; DB 24; Length 1371;
Best Local Similarity 59.7%; Pred. No. 6.8e-99;
Matches 729; Conservative 0; Mismatches 493; Indels 0; Gaps 0;

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Qy    298 TGTGTGGTAAGTCCTGTGTTTCCCCAGTCAAGGCCATGGAAGACCCTCAAGGCGACGCCG 357
          ||   ||  || |||  |   ||| |||          || || || || || || || | |
Db     73 TGGCAGGCCTGTGCTGCCTGGTCCCTGTCTCCCTGGCTGAGGATCCCCAGGGAGATGCTG 132

Qy    358 CTCAAAAAACCGACACCAGTCATCACGACCAAGACCATCCGACTTTTAATAAAATTACTC 417
          | || || || || ||    || || || || || || || || || || || || || | |
Db    133 CCCAGAAGACAGATACATCCCACCATGATCAGGATCACCCAACCTTCAACAAGATCACCC 192

Qy    418 CAAATTTAGCCGAATTTGCTTTTTCTTTGTATAGACAATTAGCTCATCAAAGTAATTCTA 477
          | ||  | || || || || ||     | ||  | ||  | || || ||     ||    |
Db    193 CCAACCTGGCTGAGTTCGCCTTCAGCCTATACCGCCAGCTGGCACACCAGTCCAACAGCA 252

Qy    478 CTAACATTTTTTTTAGTCCTGTTTCTATTGCCACTGCTTTCGCCATGTTGAGTTTAGGTA 537
          | || || || ||    || ||    || || || || || || ||| |     | || |
Db    253 CCAATATCTTCTTCTCCCCAGTGAGCATCGCTACAGCCTTTGCAATGCTCTCCCTGGGGA 312

Qy    538 CTAAAGCCGATACCCATGACGAGATTTTAGAAGGTTTAAACTTTAATTTGACCGAAATCC 597
          | || || || || || || || || ||  | || ||  | || || ||  | || || || |
Db    313 CCAAGGCTGACACTCACGATGAAATCCTGGAGGGCCTGAATTTCAACCTCACGGAGATTC 372

Qy    598 CAGAAGCCCAAATTCACGAGGGTTTTCAAGAGTTGTTGAGAACTTTGAATCAACCTGATT 657
          | || || || || || || || || || ||  |  |  | ||  | || || || ||
Db    373 CGGAGGCTCAGATCCATGAAGGCTTCCAGGAACTCCTCCGTACCCTCAACCAGCCAGACA 432

Qy    658 CTCAATTGCAATTAACTACTGGTAACGGTTTATTTTTGTCTGAAGGTTTAAAATTGGTTG 717
            ||  | ||  | || || || || ||  | ||  |   || ||  | ||  | || |
Db    433 GCCAGCTCCAGCTGACCACCGGCAATGGCCTGTTCCTCAGCGAGGGCCTGAAGCTAGTGG 492

Qy    718 ACAAATTCCTAGAAGACGTCAAGAAACTATATCATAGTGAGGCTTTTACCGTTAATTTTG 777
          | || ||  | || || || || ||  | || ||    || || || || || || || | |
Db    493 ATAAGTTTTTGGAGGATGTTAAAAAGTTGTACCACTCAGAAGCCTTCACTGTCAACTTCG 552

Qy    778 GTGATACTGAGGAAGCTAAAAAGCAAATTAATGATTATGTTGAGAAAGGCACCCAGGGTA 837
          | || || || || || || || || || || || ||||| || ||||| || || || || |
Db    553 GGGACACCGAAGAGGCCAAGAAACAGATCAACGATTACGTGGAGAAGGGTACTCAAGGGA 612

Qy    838 AGATCGTTGACCTAGTTAAAGAATTAGATCGTGATACCGTCTTCGCACTAGTTAACTATA 897
          | || || ||  | || || ||  | ||  | || || || || || || || || || | |
Db    613 AAATTGTGGATTTGGTCAAGGAGCTTGACAGAGACACAGTTTTTGCTCTGGTGAATTACA 672

Qy    898 TTTTTTTCAAGGGTAAGTGGGAACGTCCTTTCGAGGTTAAAGATACTGAAGAGGAAGATT 957
          | || || || || || ||||| | || || || || || || || || || || || | |
Db    673 TCTTCTTTAAAGGCAAATGGGAGAGACCCTTTGAAGTCAAGGACACCGAGGAAGAGGACT 732

Qy    958 TTCATGTTGATCAAGTTACTACTGTCAAAGTTCCAATGATGAAAAGACTGGGTATGTTCA 1017
          | || || || || || || || || || || || || |||||||  |  | || ||||| |
Db    733 TCCACGTGGACCAGGTGACCACCGTGAAGGTGCCTATGATGAAGCGTTTAGGCATGTTTA 792

Qy   1018 ATATTCAACATTGCAAAAAATTAAGTTCTTGGGTCTTATTAATGAAGTATTTAGGTAACG 1077
          | || || || || || ||  |       |||||  |  | ||||| ||  | || || | |
Db    793 ACATCCAGCACTGTAAGAAGCTGTCCAGCTGGGTGCTGCTGATGAAATACCTGGGCAATG 852

Qy   1078 CTACTGCTATTTTTTTTTTACCAGACGAAGGTAAGCTTCAACATTTAGAGAATGAGTTGA 1137
          | || || || || ||  | || || || || || || || || ||  | || |||||  | |
Db    853 CCACCGCCATCTTCTTCCTGCCTGATGAGGGGAAACTACAGCACCTGGAAAATGAACTCA 912

Qy   1138 CTCATGACATTATTACTAAATTTTTAGAGAACGAGGATCGTCGTAGCGCTTCTCTGCACC 1197
          | || || || || || || || || ||  | || || || ||  |  |    ||     | ||
Db    913 CCCACGATATCATCACCAAGTTCCTGGAAAATGAAGACAGAAGGTCTGCCAGCTTACATT 972

Qy   1198 TGCCAAAGTTAAGTATCACCGGTACTTACGACTTAAAATCTGTTTTAGGCCAGTTAGGTA 1257
          | || ||  |    || || || || || ||  | ||    ||  | || ||  | || |
Db    973 TACCCAAACTGTCCATTACTGGAACCTATGATCTGAAGAGCGTCCTGGGTCAACTGGGCA 1032

Qy   1258 TTACCAAAGTTTTTTCTAACGGTGCCGATTTGAGTGGTGTTACTGAAGAAGCTCCATTAA 1317
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          | || || || ||    || || || ||  |    || || || || || || ||  | |
Db   1033 TCACTAAGGTCTTCAGCAATGGGGCTGACCTCTCCGGGGTCACAGAGGAGGCACCCCTGA 1092

Qy   1318 AATTGAGTAAAGCTGTTCACAAAGCCGTCTTAACTATTGATGAAAAGGGTACCGAGGCCG 1377
          |  |    || || || || || || ||  | || || || || || || || || || | |
Db   1093 AGCTCTCCAAGGCCGTGCATAAGGCTGTGCTGACCATCGACGAGAAAGGGACTGAAGCTG 1152

Qy   1378 CCGGCGCTATGTTCCTGGAAGCTATTCCAATGAGCATTCCACCAGAAGTTAAATTTAATA 1437
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Db   1153 CTGGGGCCATGTTTTTAGAGGCCATACCCATGTCTATCCCCCCCGAGGTCAAGTTCAACA 1212

Qy   1438 AACCATTCGTTTTTCTGATGATCGAGCAGAACACTAAAAGCCCATTGTTTATGGGTAAGG 1497
          |||| || || ||  | ||||| || || || || || ||    ||  | || ||||| || |
Db   1213 AACCCTTTGTCTTCTTAATGATTGAACAAAATACCAAGTCTCCCCTCTTCATGGGAAAAG 1272

Qy   1498 TTGTCAACCCAACTCAGAAGTA 1519
          | || || || || || || ||
Db   1273 TGGTGAATCCCACCCAAAAATA 1294
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Search completed: December 6, 2002, 21:11:32
Job time : 245.5 secs